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THE PRESENCE, MISSION, AND INDWELLING OF THE DIVINE PERSONS IN THE JUST



I. THE FACT OF THE PRESENCE

SACRED Scripture assures us of the reality of such a presence by affirmations which are well-known. Nonetheless it is worthwhile to examine these affirmations in order to draw from them the greatest possible light on a mystery at once so beautiful and impenetrable. Our Lord asserts:

If any one love me, he will keep my word, and my Father will love him, and we will come to him, and will make our abode with him.¹ If you love me, keep my commandments. And I will ask the Father, and he shall give you another Paraclete, that he may abide with you forever. The spirit of truth who . . . shall abide with you, and shall be in you.² If I go not, the Paraclete will not come

¹ John 14:23.

² *Ibid.* 14:15-17.

to you; but if I go, I will send him to you.³ But when the Paraclete cometh, whom I will send you from the Father, the Spirit of truth, who proceedeth from the Father.⁴

St. Paul confirms the testimony of the Saviour:

We are the temple of the living God.⁵ The charity of God is poured forth into our hearts by the Holy Ghost, who is given to us.⁶ Or know you not that your members are the temple of the Holy Ghost, who is in you, whom you have from God?⁷ Know you not, that you are the temple of God, and that the Spirit of God dwelleth in you? . . . For the temple of God is holy, which you are.⁸ And because you are sons, God hath sent the Spirit of his Son into your hearts, crying: Abba, Father.⁹

These texts, considered in their entirety, affirm clearly the presence of the Three Divine Persons in all Christians who are in possession of grace and charity, even in baptized infants.¹⁰ The coming of the Father and the Son and the mission of the Holy Spirit, which seem conceded exclusively to adult Christians, since they are capable of actually loving the Son and of observing His commandments, can be understood only in the sense of a *new* coming and a *new* mission, not of the substantial but of the accidental and psychological order, which is proper to love and the practice of Christian virtue. Hence, there is no doubt that all Christians without distinction become through grace the habitation and temple of the Holy Spirit and, for this reason, of God and of the other two Divine Persons, since they are indivisible in essence and operation. If the Holy Spirit is said to be in a special manner the guest of the soul and body of the just through the grace and charity by which the sanctified Members of the Mystical Body are informed, this does not mean that the Third Person has a presence which is proper and exclusive, but only an *appropriated* presence, because of the special affinity which the Apostle supposes to exist between the love of charity and the Holy Spirit. This has been

³ *Ibid.* 16:7.

⁵ II Cor. 6:16.

⁷ I Cor. 6:19.

⁴ *Ibid.* 15:26.

⁶ Rom. 5:5.

⁸ I Cor. 3:16-17.

⁹ Gal. 4:6.

¹⁰ Cf. Council of Vienne, Const. "De Summa Trinitate," Denzinger, *Enchiridion Symbolorum*, ed. 17, no. 483; Council of Trent, sess. 6, chap. 2, Denzinger, no. 800.

the interpretation which the Greek and Latin Fathers have given to the thought of St. Paul. They, in fact, are in accord in asserting and defending the consubstantiality, circuminsession, and identity of the attributes and operations *ad extra* of the Three Divine Persons. None of the actions comprised in the sanctification of the soul is attributed to the Holy Spirit in such a way as to make us think that His union with the soul in grace is informative and personal. Therefore, to ascribe to the Greek Fathers (as Lessius, Petavius, Thomassin, Scheeben have done) the opinion of an immediate, proper, personal union between the sanctified soul and the Divine Paraclete, is to falsify the real meaning of patristic thought. The Fathers, especially the ante-Nicenes, who adhered more in doctrine and language to Divine Revelation, certainly placed in relief the action of the Holy Spirit in the divine work of sanctification, but only with the intention of noting the special conformity and resemblance between the gifts of God and the Prime Gift, which is the Personal Love of the Father and the Son. Thus the peculiar relations between the soul and the Holy Spirit are unfolded always in the sphere of exemplary causality, but never in that of informative, efficient, or final causality. And even the exemplarity, or in other words the resemblance, is asserted not as exclusive but as more manifest in virtue of the "appropriation."¹¹

II. NATURE OF THE PRESENCE OF THE TRINITY IN THE JUST

A. *Is the testimony of Sacred Scripture* in favor only of a psychological, that is, an intentional and affective presence; or also of an ontological, substantial and therefore thoroughly real presence? The texts cited above beautifully conciliate both meanings. They speak to us explicitly of a *mission* and an *indwelling* which are effected only in the just who love God and observe His commandments; but, implicitly, they suppose

¹¹ Cf. Dom L. Chambat, O.S.B., *Les Missions des Personnes de la Sainte-Trinité, selon Saint Thomas d'Aquin* (ed. Fontenelle, Abbey St. Wandrille, 1943), p. 196; P. Galtier, S. J., *Le Saint Esprit en nous d'après les Pères grecs* (Rome, 1946); and *L'Habitation en nous des trois Personnes* (Rome, 1950).

a real and substantial *presence* of the Blessed Trinity in all Christians who are in the state of grace. We have, however, sufficient basis in Revelation to distinguish the "presence" of the Blessed Trinity from the "coming" of the Father and the Son, the "mission" and "gift-giving" of the Holy Spirit, and the "indwelling" of the Father, Son, and Holy Spirit. The "presence," demanded and revealed by the supernatural gifts of grace and charity, can be only physical and substantial because, according to the multiple affirmations of the New Testament, only God is the immediate author of grace. And the author of grace is the triune God, since grace renders us participants of the innermost divine nature which is unique and subsistent in three distinct Persons. Only one who possesses grace and charity can love the Son of God, observe His precepts, and receive the Father and the Son into himself as permanent guests. In like manner, only one who is already a son of God through grace is made worthy to receive also His Spirit—indeed, to have the right to exclaim, "Abba, Father!" But, as an obvious conclusion, who can with greater right be the giver of grace and the gifts if not the triune God, who is really present in us because working in us. Therefore, the physical, substantial, and immediate presence of the Three Divine Persons, communicating to us their gifts and, through these gifts forming in us their supernatural image, is the presupposition and the ontological foundation of another presence, of us to them, which is effected psychologically by the twofold process of experimental knowledge and of love.

B. *The opinions of modern theologians.* It is not our intention to explain all these opinions extensively, but only to sum up their essential content, which must then be evaluated in the light of the Magisterium of the Church and the doctrine of St. Thomas:

1. The real and substantial presence of the Blessed Trinity in the soul of the just is the result of the divine action which is productive of grace, of an action which in the order of efficient causality is common to all Three Divine Persons. God,

One and Three, is present in all creatures as cause of their natural being (the presence according to natural immensity); but through a new title and in a more intimate way He becomes the liberal giver of supernatural being (the presence according to supernatural immensity). Grace and charity, therefore, reveal the real and substantial presence of the Blessed Trinity in the just and are, in turn, the efficient cause of the intentional and affective presence of the Divine Persons inasmuch as they are made the object and term of supernatural knowledge and love (Vásquez, Coninck, Terrien).¹²

2. The real and substantial presence of the Trinity in the just is the proper effect of charity inasmuch as charity, being a relation of supernatural friendship between God and man, is the meritorious cause of the real presence of God, One and Three, in the soul who loves Him. It is, indeed, most fitting that God, the best and all-powerful Friend, make Himself really present to those who love Him in order to make them enjoy more intensely His divine friendship (Suárez).¹³

3. The real and substantial presence of the One God, the Creator, is the proper result of the creative action, which is common to the Three Divine Persons by reason of the identical divine nature (the presence according to immensity). The presence of God, One and Three, who abides in the soul of the just as object of a quasi-experimental knowledge and of love, is founded on grace and is due, actually, to the exercise of the gifts of wisdom and of charity. This presence necessarily presupposes the first (but is specifically distinct from it) and is reserved only for the just, while the presence according to supernatural immensity is common even to sinners who have faith (Cardinal Cajetan, John of St. Thomas, Gardeil, Garrigou-Lagrange, and others).¹⁴

¹² G. Vásquez, *Comment. et Disput. in Iam Partem D. Thomae*, q. 8, disp. 30, c. 3 (ed. Compluti, 1598), p. 235; Coninck, *De Trinitate*, disp. XV, dub. II, 2^a; Terrien, *La grâce et la gloire*, I, p. 246. (Quoted by A. Michel, article "Trinité" in *DTC.*, CXLII, 1947, col. 1842-1843.)

¹³ Suárez, *De Trinitate*, lib. XII, "de missione divinarum personarum," c. 5, nos. 9-10 (ed. Vives, I, p. 810).

¹⁴ Cajetan in *Summa Theol.*, I, q. 43, a. 3; John of St. Thomas, *Curs. theol.*, in

4. God, One and Three, is already present in all creatures as the unique and indivisible author of their natural being (the presence according to immensity). But by producing grace in the just, He makes Himself really and substantially present, not only as *efficient* cause but also as *formal-exemplary* cause, since grace is a formal participation of the divine nature which is subsistent in three distinct Persons; then the gifts of wisdom and charity reproduce in the soul, at least by appropriation, the image of the Word and of the Holy Spirit. From this *ontological* presence, which is actualized in the sphere of a twofold causality (efficient and exemplary), follows the *psychological* presence of the Trinity in the soul of the just man, inasmuch as through grace and the gifts connected with it he is rendered capable of possessing in his own faculties God, One and Three, as object of knowledge and love (D'Alès, Galtier, Michel, Retailleau, Menendez-Reigada, Urdánoz, Parente, and others).¹⁵

C. *The teaching of the Magisterium of the Church.* Leo XIII, after confirming that all the "perfections and works" manifested by God and produced outside Himself are common to the Blessed Trinity by reason of the one and only divine essence, recognizes as legitimate the use of *appropriation*. Here are the words in which he concludes with reference to the presence of the Blessed Trinity in us:

This wonderful union, which is properly called "indwelling," differing only in degree or state from that which binds the blessed to God in eternal happiness, although it is without doubt produced

Summa Theol., I, q. 43, a. 3 ad. 17, a. 3; A. Gardeil, O. P., *La structure de l'âme et l'expérience mystique*, II, p. 75; B. Froget, O. P., *De l'habitation du Saint-Esprit dans les âmes justes*, p. 157; R. Garrigou-Lagrange, O. P., *Perfection chrétienne et contemplation* (Paris, 1923), Appendices, pp. 116-117.

¹⁵ A. D. Alès, *De Trinitate, De Deo Trino* (Paris, 1934), p. 286; P. Galtier, S. J., *L'Habitation en nous des trois personnes* (Rome, 1950); A. Michel, "Trinité. Habitation dans les âmes," *DTC*, CXLII (1947), col. 1849-1851; M. Retailleau, *La Sainte Trinité dans les justes* (Angers, 1932); J. M. Menendez-Reigada, O. P., "Inhabitación, dones y experiencia mística," in *Rev. Esp. de Teología*, 6 (1946), 61-101; P. Parente, *De Deo Trino* (Rome, 1941), pp. 308-309; T. Urdánoz, O. P., "La inhabitación del Espíritu Santo en el alma del justo," in *Rev. Esp. de Teología*, 6 (1946), 465-534.

by *the presence of the whole Trinity . . .* is attributed in a peculiar manner to the Holy Spirit. And although traces of the power and wisdom of God appear even in the sinner, only the just share in charity which is, as it were, the characteristic of the Holy Spirit.¹⁶

In even clearer words Pius XII reaffirms the teaching of his great predecessor:

But let all agree uncompromisingly on this, if they would not err from truth and from the orthodox teaching of the Church: to reject every kind of mystic union by which the faithful would in any way pass beyond the sphere of creatures and rashly enter the divine even to the extent of one single attribute of the eternal Godhead being predicated of them as their own. And besides let all hold this as certain truth, that *all these activities are common to the most Blessed Trinity*, insofar as they have God as supreme efficient cause. Let it be observed also that one is treating here of a *hidden* mystery, which in this earthly exile can never be fully disclosed and grasped, and expressed in human language. The Divine Persons are said to be indwelling inasmuch as *They are present to intellectual creatures in a way that lies beyond human comprehension, and are known and loved by them.*¹⁷

D. *The doctrine of St. Thomas.* Faithful to the teaching of Revelation and of the Fathers of the Church, but especially to the teaching of St. Augustine and to that of his master Albertus Magnus, the Angelic Doctor proposes to investigate the inscrutable mystery of the presence of the Trinity in us insofar as such an investigation is possible by "reason enlightened by faith," *ratio fide illustrata*.¹⁸ Here are the essential points in which the real thought of Aquinas seems to be found:

1. *The whole Trinity dwells in us through grace*; the attribution to one distinct Person has only the value of appropriation: "The whole Trinity dwells in us through grace, but in a special manner the indwelling can be *appropriated* to one Person

¹⁶ Leo XIII, Encyclical *Divinum illud munus*, A. S. S. (1897), p. 653. Author's italics.

¹⁷ Pius XII, Encyclical *Mystici Corporis Christi*, A. A. S. (1943), pp. 35-36. Author's italics.

¹⁸ Vatican Council, Denzinger, no. 796.

through some special gift which has a resemblance with the Person, by reason of which He is said to be sent."¹⁹

2. *We are sons of all three Persons of the Blessed Trinity.* We cannot call ourselves sons of one Person more than of another except through appropriation: "We are called sons of the Trinity through grace."²⁰ "Although the act of adoption is common to the whole Trinity, it is appropriated to the Father as author, to the Son as exemplar, to the Holy Spirit as impressing in us a likeness to this exemplar."²¹

3. The *real* and *substantial* presence of the Three Divine Persons in the soul in grace is due properly to their common activity in the production of grace; through appropriation such a presence is attributed to the Son or to the Holy Spirit:

Since the Father, Son, and Holy Spirit have the same power and essence, all that God effects in us, as by an efficient cause, is done at the same time by the Father, Son, and Holy Spirit. Nevertheless, the word of wisdom sent to us by God, by which we know Him, is the proper reflection of the Son; and, similarly, the love by which we love God is the proper reflection of the Holy Spirit. . . . Since the divine effects not only begin to exist by divine operation but are also held in their being by it. . . . But nothing can work where it is not, for the worker and the work must be in action at the same time, as the mover and the thing moved. Thus it is necessary that wherever there is any effect of God, God Himself must be there as the agent.²² In the reception of gifts of this kind the Divine Persons are had as if in a new manner, as leading or joining us to the end.²³

4. The invisible *procession* or *mission* of the Divine Persons in the soul in grace is attributed solely to the Son and the Holy Spirit because they alone have their origin from one or more of the other Persons in the bosom of the Trinity. With regard to the Son, the mission is effected through the gift of *wisdom*,

¹⁹ *De Veritate*, q. 27, a. 2, ad 3; cf. *I Sent.*, d. 15, q. 2, a. 2, ad 3.

²⁰ *III Sent.*, d. 4, q. 1, a. 2.

²¹ *Summa theol.*, III, q. 23, a. 2, ad 3.

²² *IV Cont. Gent.*, c. 20.

²³ *I Sent.*, d. 15, q. 4, a. 1; *Summa Theol.*, I, q. 43, a. 3, ad 2; a. 6; II-II, q. 45, a. 6, ad 2.

originated (by appropriation) from the Word and reproducing properly (in other words, specifically), the image of the Word, who is "generated Wisdom," *Sapientia genita*. With regard to the Holy Spirit, the mission is effected through charity, having its origin (by appropriation) in the Holy Spirit and reproducing properly the image of the Third Person, who is "Personal Love." Such attribution, although proper, is not exclusive. Neither does it denote separation between the two missions, because the aforementioned gifts do not reproduce the image of the Divine Persons perfectly and according to their most distinctive and incommunicable characteristic, which is a *real, relative opposition*, as the Council of Florence authoritatively affirms: "In God all things are one, where there is no opposition of relation."²⁴

For this reason, although through the Incarnation only the Word is united to human nature, all Three Divine Persons, through wisdom and charity, are in some way represented, perceived, and enjoyed. The mission of the Son is had principally in the *actual* perception, by means of the *act* of the gift of wisdom, that is, of the procession of the Word from the Father; and the mission of the Holy Spirit, in the joyful perception, through the acts of wisdom and love, that is, of the procession of Personal Love from the Father and the Son: "to be sent, in respect to the Son, means to be from the Father. And as to be the gift of God in respect to the Holy Spirit, means to proceed from the Father; so to be sent, is to be known to proceed from the Father."²⁵

5. Both the Son and the Holy Spirit are *given* to us, but to the Holy Spirit alone belongs the name of *Gift* of the Father and Son:

Because the Holy Spirit is love, He has in Himself, by reason of His procession both that which is given and that which is the principle of giving; whence He is of Himself and primarily gift. . . .

²⁴ Council of Florence, *Decr. pro Iacobitis*, Denzinger, no. 703; *I Sent.*, d. 15, q. 4, a. 1; *Summa Theol.*, I, q. 43, a. 5.

²⁵ St. Augustine, *De Trinitate*, IV, 20, 29; *PL*, 42, 908, quoted by St. Thomas in *Summa Theol.*, I, q. 43, a. 5; cf. *I Sent.*, d. 15, q. 4, a. 1.

Whence just as love is proper to Him, so is also the gift. . . . Wherefore although the Son is given or sent, the reason of the free giving is love, who is the Holy Spirit. And that reason does not pertain to the Son, whence He cannot properly be called gift even though He is said to be given.²⁶

6. The *physical, immediate, and substantial* union between the Divine Persons and our soul in this life is gained only in the sphere of efficient causality; but this union, being common to all creatures,²⁷ is not a prerogative of the state of grace. The union with the Trinity through representation (or in the order of exemplary causality) is of itself neither physical nor substantial nor immediate; nor is it even peculiar to the state of grace, since man, even naturally, was created to the image and likeness of the august Trinity, inasmuch as he is capable of knowing and loving God.²⁸ In an accidental and supernatural manner the state of grace deepens and perfects the pre-existing representative union which was impressed on the substance and the faculties of our soul. The union with the Trinity as object of knowledge and love (that is to say, in the sphere of formal and final causality) is not—so long as “we walk by faith, and not by vision”²⁹—a physical, immediate, and substantial union. Such a union will be had in heaven, when, in order to render Itself actually visible and seen, the Divine Essence will unite Itself immediately to our intellect, which will be strengthened by the light of glory.³⁰ Charity, on the other hand, will not unite us in such a manner to God, not even in heaven. Charity binds the soul immediately to God by a “spiritual bond,” that is to say, by affection, not in the sense that it makes our will adhere physically to the Infinite Good, but in the sense that it makes us love God *for Himself*, as the Highest Good and the Final End. Moreover, it is in this life the efficient meritorious cause of the real possession of God in heaven.

²⁶ *I Sent.*, d. 18, q. 1, a. 2, and ad 1; cf. *IV Cont. Gent.*, c. 23; *Summa Theol.*, I, q. 38, aa. 1-2.

²⁷ Cf. *Summa Theol.*, I, q. 43, a. 3; q. 45, a. 6.

²⁸ *Ibid.*, I, q. 93, a. 8.

²⁹ II Cor. 5:7.

³⁰ Cf. Denzinger, no. 530.

But the real and immediate union between our soul and the Trinity will not be formally effected except through the act of vision.³¹

7. *Union with the Triune God, as object of experimental knowledge and of love, is proper and exclusive to the supernatural order.* This union is verified in the exercise of the gifts of *wisdom* and *charity*. In this life the gift of wisdom gives us only a *quasi*-experimental knowledge of the Son and of the other Divine Persons, that is to say, an *indirect* and *mediate* knowledge, inasmuch as such a gift is an image of the Word through which the movement of the intellect is borne toward God Himself. The same can be said of charity: it is the source of the true and proper fruition of the Divine Persons, but *imperfect* and *indirect*, because such joy does not spring immediately from the presence of God clearly seen, but from a filial affection which confirms and unites our spirit with the Spirit of Love.³²

It must not be thought, however, that this union is only intentional, such as is effected with someone known only in a speculative way and not present to us, but whom we desire to possess. It is rather an effective, experimental union which implies a certain presence of the Divine Good by His most excellent effect: "Charity is the love of God . . . and for this reason what is loved is in the lover *by its most excellent effect*. . . . And so the spiritual joy which has God for its object is caused by charity."³³ But because the union is not immediate and the fruition not perfect the soul does not have the certainty of the presence of God and of the supernatural character of its own sentiments.³⁴

8. *Baptized infants* are already *actually* temples of the Holy Spirit and of the Trinity, who live in them substantially as efficient cause of grace; but infants do not possess the Trinity

³¹ Cf. *Summa Theol.*, I-II, q. 2, aa. 4-8; q. 28, a. 1; II-II, q. 27, a. 4 and ad 3; Dante, *Paradiso*, 28, 106-111.

³² Cf. *I Sent.*, d. 14, q. 2, a. 2, ad 3; *Summa Theol.*, I, q. 93, a. 8; I-II, q. 11, a. 4.

³³ *Summa Theol.*, II-II, q. 28, a. 1.

³⁴ Cf. *I Sent.*, d. 15, q. 4, a. 1, ad 1.

as object of knowledge and love except virtually or, in other words, *in habitu*:

God is said to indwell supernaturally, as if in a familiar home, in the just whose mind is capable of knowing and loving God, even if they may not know and love in act, so long as they have through grace the habit of faith and charity, as is well-known in the case of baptized children.³⁵

9. *All the just*, since they are endowed with the gift of wisdom and with charity, are in a degree enabled to enjoy the presence of the Divine Persons; yet, as new missions occur "according to the progress of virtue and the increase of grace,"³⁶ enjoyment of the indwelling becomes more frequent and intense as the soul advances in the spiritual life, and in the third stage, that of the *unitive life*, it is almost continuous.

So He is said to dwell in such persons, because He works in them secretly that they may be His temple; and this He accomplishes in the proficient and in those who are persevering in their efforts to become proficient.³⁷

10. It cannot be proved with the authority of the Angelic Doctor that the divine essence and the Holy Spirit are rendered really and substantially present in the will as the uncreated term of our act of love—"réalité d'amour."³⁸ The texts cited in regard to this can be explained as referring to God as efficient or exemplary or final cause, but not yet as arrived at immediately in Himself. And it does not even seem conformable to the thought of St. Thomas to explain his saying, "Everything

³⁵ *In I ad Cor.* 3:17; lect. 3; cf. *Summa Theol.*, I, q. 43, a. 6; q. 97, a. 7.

³⁶ *Summa Theol.*, I, q. 43, a. 6; cf. *I Sent.*, d. 15, q. 5, a. 1.

³⁷ St. Augustine, *Epist.* 187, 8, 27; *P. L.* 33, 842.

³⁸ Cf. S. J. Dockx, O.P., *Fils de Dieu par grâce* (Paris: Desclée, 1948), p. 71.

The author realizes that he has against him the Salmanticenses, who, though conceding a certain probability to his opinion, consider themselves unable to accept it, even for the will of the blessed in heaven, for the following reason: "quia de ratione impulsus interni est quod oriatur effective a voluntate quam trahit et impellit ad obiectum amatum; nam praedictus impulsus est pondus, quo quis sponte fertur in rem amatam. Implicat autem ut qui feratur et moveatur per impulsum sibi non spontaneum, nec voluntarium; nam eo ipso quod pondus impellens vim appetitivam non esset illi voluntarium, violenter potius quam spontanee illam traheret." Salmanticenses, *Curs. theol.* XII, "De. Car.," disp. IV, dub. I, nn. 19-20.

loved is in the lover insofar as this is possible,"³⁹ in the sense of a real, immediate presence.⁴⁰

CONCLUSION

The teaching of the Angelic Doctor, considered integrally, appears entirely in keeping with the data of Divine Revelation and the doctrine of the Fathers; moreover, it justifies the discordant theories of modern theologians by harmonizing them.

It is true, in fact, that the presence of the Three Divine Persons, existing in the human soul as "object of knowledge and term of love," is founded on the state of grace and has, as its efficient cause, the activity of the gift of wisdom and of the virtue of charity. It is likewise true that, by reason of certain supernatural charisms, the *mission* and the *gift-giving* of the last two Persons and the *indwelling* of the Blessed Trinity are properly and actually effected.

Therefore, the *physical* and *substantial* presence of the august Triad in the soul, which presence precedes ontologically the quasi-experimental perception which is achieved through the acts of wisdom and charity—such a presence, I say, consisting formally in a "relation of closeness" between the Blessed Trinity and the soul, is founded on the divine trinitarian action, causative of grace and its consequent gifts.

The presence of the Blessed Trinity in the soul of the just, even in those deprived of the use of reason, is a supernatural reality which the human mind, although illumined by faith, cannot fully grasp in its innermost truth. The various theories devised to explain it must be fused in the Thomistic theory so that their convergent light may dissipate as much as possible the sacred shadows of the mystery. We do not presume to understand the mystery, and are content to affirm the exact significance of the revealed truth without impoverishing or denying it with the foginess of our illogical assertions.

³⁹ *IV Cont. Gent.*, c. 21.

⁴⁰ Cf. F. Bourassa, S. J., "Les missions divines et le surnaturel chez S. Thomas d'Aquin" in *Sciences ecclésiastiques*, I (Montreal, 1948), p. 85.

God, One and Three, is present in the just as efficient, exemplary, and final cause of their sanctification. Through efficient causality alone, however, we have in this life the *first substantial* and *immediate* presence of the Divine Guest, while imitation, knowledge, and love unite us to Him, already existing in us, *by means of* His gifts. The love with which we love and taste the goodness of God, is an effect of the Spirit of Love whom we already possess: "The charity of God is poured forth into our hearts by the Holy Spirit, who is given to us."⁴¹ The knowledge of the Three Divine Persons which we have through the gift of wisdom is a foretaste of the blessed vision which is communicated to us by the Word, but this knowledge is unable to tear aside the veil of faith: "We see now through a glass in a dark manner, but then face to face."⁴²

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⁴¹ Rom. 5:5; cf. *Summa Theol.* I, q. 43, a. 3 ad 2.

⁴² I Cor. 13:12.

THE PHYSICS OF LOCAL MOTION

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I

THE science of local motion is fundamental in natural philosophy. Locomotion is the primary kind of motion; it is generated last of the three kinds of motion so that in order of being it is first, as the Philosopher has observed.¹ Thus, owing to its primacy, a proper knowledge of the nature of local motion is necessary for a full understanding of the first of the five ways by which St. Thomas establishes by reasoning the existence of God as the Author of Nature, namely, the argument from motion in the world.²

In the *philosophia perennis*, unfolded by Plato, Aristotle, the later Greek and Roman philosophers, and the Jewish, Arab, and Christian doctors of succeeding ages, motion is recognized as a transition from a state of potentiality to a state of actuality; further, such a transition to actuality can only come about by the influence of something already in a state of actuality; hence we have the principle that whatever is in motion must be moved by another. This principle illuminated the sciences of Nature and guided philosophers along sure paths during those ages in which the *philosophia perennis* was the inspiration of all but a few eccentric and misguided individuals.

However, since the revolution in physical science in the seventeenth century and the appearance of sciences of Nature alien to the *philosophia perennis*, an entirely different doctrine concerning local motion has generally prevailed. Newton's first law of motion lays down that every body in the universe continues in its state of rest or of uniform motion in a straight line unless compelled by external force to change that state. On Newtonian

¹ Aristotle, *de Caelo*, 310 b 33-35; *Physic.*, 243 a 12; 260 a 26-29; etc.

² *Summa Theologiae*, I, q. 2, a. 3.

dynamics a freely moving body does not require an external mover; a mover is required only to *change* the motion of the body, i. e. to cause acceleration, not to continue its steady state of motion; the Newtonian theory of locomotion thus evokes the principle of the *inertia* or *impetus* or *momentum* possessed by bodies. Newton's doctrine is thus quite at variance with the doctrine of Aristotle and St. Thomas according to which a moving body must be moved continuously by another agent if its movement is not to cease.

The Newtonian system was not wholly new; it was rather the definitive form of doctrines of motion which were propounded in the fourteenth century by Jean Buridan, Nicolas Oresme, and others of the University of Paris; doctrines which became ever more widely disseminated until their final triumph in the seventeenth century with Galileo, Descartes, Newton and hosts of others who participated in the *élan* of the times.

These doctrines of motion are quite foreign to the *philosophia perennis*; with the triumph of the impetus doctrine in the seventeenth century came the general abandonment of the traditional doctrine of motion; the ancient science of nature with its rich patrimony of so many centuries henceforth found no hearing in the universities of Europe; the ancient learning was preserved in obscurity by a discriminating few, for the most part in the seclusion of the cloister, while the learned world followed new and seductive paths.

Further, not only were the Aristotelian doctrines of motion abandoned in the seventeenth century, but the whole framework of the *philosophia perennis* was given up at the same time by the generality of philosophers, and indeed has remained in general oblivion to this day. There are no doubt many reasons for this great seventeenth century tidal movement in philosophical opinion, but prominent among them is this: it was believed very widely that the experimental physics of Galileo and Newton had overthrown the Aristotelian physics, and it was further generally believed that this defeat in the field of physical science was of such a fundamental character that the

whole Aristotelian system was thereby rendered untenable, and that other philosophies of the world must be sought. The science of motion was certainly not the prime mover in the philosophical revolution; for that we must look deeper; but the doctrines of motion precipitated this revolution and confirmed it in popular estimation even to our own day.

The science of local motion is thus of the greatest import, not only intrinsically but also historically in understanding the sway which these philosophical vagaries have exercised during the last three centuries. We shall now examine the doctrines of local motion, and in particular the general principle that whatever is moved must be moved by another.

The Two Doctrines of Local Motion.

Our first general inquiry will be directed to this question: does the physics of Galileo and Newton truly render the Aristotelian physics of locomotion untenable, or does the common belief that this is the case rest on a misconception of the respective natures of these doctrines?

There are several matters which must be considered:

(1) The principle that motion requires a constant mover is of such a general character that it does not depend on any particular theory of locomotion. Motion means the transition from potency to actuality, and this can only be brought about by something already in a state of actuality. Thus, for instance, we heat a pot of water by placing it on the fire; again, a man cannot teach arithmetic to another unless he already knows arithmetic himself.

This contention is so fundamental to the world that it may justly be termed metaphysical rather than merely physical. It belongs to a higher and more general order than the particular processes of physical science; it does not rest upon the latter, but rather the particular doctrines of the special sciences flow from the general principle.

To trace the operation of our general principle in its ramifications in local motion will lead to a deeper understanding of

local motion, since the inner springs of that motion will thereby be made manifest.

(2) We have discussed elsewhere³ the doctrine that the system of physics inaugurated by Galileo and Newton is only *prima facie* physics in the proper sense of that science, namely, an inquiry into the *physics* or nature of things. According to this contention (which will be one of the bases of the present inquiry into motion), physics since Galileo has been progressively detached from the family of the real sciences and no longer has any community with the head of the family, namely, metaphysics. A science so detached we shall henceforth designate as Kantian.

The structure of modern Kantian⁴ physics has been built up as an elaborate *tour de force* with its own autonomous domestic economy, and with a goal which is ultimately pragmatic. The laws and principles of Kantian physics are imposed *on* Nature by the physicists, and are not found *in* Nature; they are not the real principles of Nature any more than the patterns of the formal gardens of Versailles or the conventional lines of latitude and longitude on a map represent Nature.

Consequently, the fact that Newton's laws of motion are fundamental to modern physics does not establish these laws as the laws of Nature. Hence the general principle that motion in the world requires a constant mover is in no way invalidated by the existence of a *prima facie* conflict between this principle and Newton's laws of motion. The conflict is only apparent, not real: the metaphysical principle pertains to the real world, the Newtonian principle to an artificial world.

(3) In investigating the nature of local motion we shall not be able to derive immediate assistance from the physical theories which have been entertained since the days of Galileo, for the reasons mentioned in (2). However, these systems are not wholly fruitless for our purpose. The systems of modern or

³ G. W. R. Ardley, *Aquinas and Kant*, ch. 3 (Longmans: London, 1950).

⁴ The reason for associating such sciences with the name of Kant is that Kant was the first to glimpse their true nature (cf. *Aquinas and Kant*).

Kantian physics being mosaics drawn from a variety of sources, they frequently contain disjointed fragments and echoes of metaphysical doctrines. Moreover, if we inquire closely we can often find devious connections of an indirect kind between the modern systems and the nature of the world.⁵

Consequently, although we cannot directly draw upon the theories of Kantian physics to formulate the science of locomotion, yet we may draw instructive comparisons and illustrations from these various theories.

(4) It might be thought that the highly mathematical character of so many of the laws and theories of modern physics would preclude any significant comparison with the non-mathematical peripatetic physics. Further reflection, however, suggests that this is not really so, since the mathematical character of the modern laws would appear to be not so fundamental and distinctive as it seems at first sight. Thus, the essentially qualitative and non-mathematical field theories of Faraday are exactly equivalent to, and may be completely transformed into the mathematical system based on the inverse square law of force. The mathematical theory, in spite of its semblance of a different nature and greater precision, is rather only a different language, and in truth has no more content than the non-mathematical theory.

It seems likely that a similar equivalence between qualitative and quantitative theories extends to all branches of modern physics, although it has not everywhere been yet unfolded. Hence we need not be deterred from a tentative juxtaposition of mathematical and non-mathematical principles.

(5) The primary laws of a Kantian physics, such as Newton's laws of motion, rarely or never fit into Nature as they stand. Consequently, along with the primary laws we almost invariably find an array of secondary modifying rules which are designed to bridge the gulf between the laws of physics and accepted

⁵ A general type of connection to be sought between the law found on modern physics and the real structure of Nature has been formulated very succinctly by Ludwig Wittgenstein in his *Tractatus Logico-Philosophicus* 6.342.

phenomena. The bridging of the gulf in modern physical science is somewhat analogous to equity in law: that which bridges the gulf between the law of the State and the norms of natural Justice. Thus Newton's laws in their simple form are immediately modified for terrestrial motions by such secondary rules as Stokes' law for the movement of an object through a viscous fluid. Without these appropriate adjustments the primary laws could not seriously be entertained.⁶ In comparing our physical doctrine of locomotion with Newtonian theories, these modifications of the latter by secondary principles will assume considerable significance.

(6) The physics of locomotion in the proper sense will be a fundamentally more coherent and ordered system than the Newtonian theory of matter and motion. The real physics is grounded on reality and illumined by universal principles; the Kantian artifact physics lacks a nature proper to itself and is an inherently mutable and contingent structure enjoying a human rather than a natural authority.

It is not to be supposed, however, that the separated physical system is wholly errant like the Prodigal Son; it has a charter, that of pragmatic success, and its separation for this purpose is quite legitimate. Even with this charter, however, modern physics, cut adrift from the steadying hand of a paternal metaphysics, is ordained to pursue mutable and airy paths to its limited goal, in contrast to the permanent and substantial paths of real physics.

The pragmatic goal of the modern systems is less exacting than the ontological goal of real physics. In the real physics a dazzling excess of light from nobler natures or a lack of power in the human intellect to penetrate earthly obduracy may render progress difficult. Hence the spectacular but shallower successes of the modern systems while the real physics has continued its sober disciplined inquiries in cloistered seclusion. We distinguish in order to unite and thus we bring the separated

⁶ This is a fact which is usually overlooked in discussions of Galileo's supposed experimental refutation of Aristotelian doctrines concerning falling bodies.

sciences back into their proper places in the family of the sciences.

The State of the Question.

Since the seventeenth century the science of Nature has been obscured and discussions of the subject vitiated by the promiscuous mixture of theories and doctrines belonging to different orders, so that today this science is in a more confused condition than it was when left by St. Thomas. By distinguishing the different orders we remove this confusion and restore the true doctrines of Nature to their proper authority. The wealth of observation of Nature which has accumulated in recent centuries has not yet been properly made use of to enrich the real science of Nature. Our inquiries into locomotion will be a first step in this direction.

The course we shall follow is historical. In general we may regard the history of physics in one of two ways: We may regard past physical doctrines as merely the debris in the evolutionary march of physical science towards greater conquests of Nature; or we may survey the whole field in such a way that the history of physics becomes *comparative physics*: this is a science like comparative anatomy or comparative law. We invoke the comparative science here in order to reach a deeper understanding of the physics of locomotion.

The Impression of the Agent on the Subject.

When we throw a stone it continues to move after it has left the hand; this suggests the necessity for a general inquiry into the persistence of impressions made on a subject by an agent. St. Thomas discusses this matter in various places. Thus, he points out,⁷ there are several cases:

(1) The impression of the agent remains permanently in the effect after the agent has ceased to act, if the impression becomes part of the nature of the effect. For instance, if a stone

⁷ *III Contra Gentiles*, c. 65.

is generated in Nature, it persists with its properties, as its hardness and its heaviness.

(2) Some things become partially attached to the nature of the subject and may persist for a long time; so habits, dispositions, etc., in man.

(3) Things of a more noble nature do not remain for an instant after the action of the agent has ceased; so light does not remain in a body when the source of the light is removed.

To these cases we might add a fourth, allied to (2):

(4) Impressions such as the violent motion given to a stone by the thrower, the heat induced in a body by being in the neighborhood of a fire, and the potency of the semen;⁸ these impressions persist for some time after the action of the original agent has ceased; the duration of their persistence depends upon the surrounding medium and its ability to conserve the original action; the subject itself has no firm grip on such impressions.

Transient impressions which come under case (4) must not be confused with permanent impressions belonging to case (1). Thus, in (1), if a heavy body is generated, the body retains its heaviness indefinitely after the generator has ceased its operation, because the form of heaviness has been imprinted on the body and has entered into its nature. Accordingly, if at any subsequent time an obstacle is removed, the body will move spontaneously downwards towards its natural place. Similarly for light bodies which move upwards.⁹ On the other hand, in (4), if a body is moved violently, the violent motion is not given to the body as its form or nature, and consequently the body does not of itself retain the violent motion; the motion which the archer imparts to the arrow persists for a certain time and then fails. The violence received from man never becomes part of the nature of the arrow as does an impression received by the creative operation of God; the violence is a transient thing given to the body in addition to its nature.¹⁰

⁸ *De Potentia*, q. 3, a. 11, ad 5.

⁹ Aristotle, *VIII Physic.*, c. 4.

¹⁰ *Summa Theol.*, I, q. 103, a. 1, ad 3.

Thus, St. Thomas, in his *Commentary on the DE CAELO* of Aristotle, discusses the question of natural and violent motion and is at pains to make this distinction between them.¹¹ It must not be thought, he remarks, that the mover producing the violent motion of the stone impresses on the stone motive virtue by which it is moved, in the way in which the virtue of the generator impresses on the thing generated a form from which the natural movement of the latter results. If this were so, continues St. Thomas, the violent motion of the stone would be an intrinsic principle in the stone, which is contrary to the notion of violent motion. Further, it would follow that the stone, from this very fact that it is moved locally by violence, is altered, which is against common sense.

In general, writes St. Thomas in another place, "that which creatures receive from God is their nature, while that which natural things receive from man in addition to their nature is somewhat violent."¹² And again: "Art takes its matter from nature, and nature receives its matter from God through creation. Now the products of art are preserved in being by virtue of the products of nature; for instance a house by the solidity of the stones. . . ." ¹³ In figurative terms we may say that art is God's grandchild.

It is clear then that the impressions made by art on nature are not permanent, but are inherently subject to attenuation and disappearance; the arrow falls, the house perishes. While the impressions of art do persist, they are preserved by natural means invoked for the purpose, as by the archer and the architect. Let us now consider how the violent motion of the arrow is continued for some time after it has left the archer.

How is Continued Violent Motion Possible?

The Philosopher gave much thought to this subject. "If everything that is in motion, with the exception of things that

¹¹ *III de Cael. et Mund.*, lect. 8: "Omne corpus quod recto motu naturaliter movetur, gravitatem habet vel levitatem—quomodo naturalis motus et violentus perficiantur . . ." this is in the commentary on the *de Caelo* 301 a 23-301 b 33.

¹² *Summa Theol.*, loc. cit.

¹³ *III Cont. Gent.*, c. 65.

move themselves [i. e., animals], is moved by something else, how is it that some things, e. g., things thrown, continue to be in motion when their movent is no longer in contact with them?" he asks.¹⁴

Some have suggested, continues the Stagirite, that the solution to the problem lies in a process of "mutual replacement" (*antiperistasis*): the thrower at the same time as he throws the thing thrown, also imparts motion to the air, and the air in motion in turn imparts further motion to the thing thrown.¹⁵ In general, A pushes B, B pushes C, C pushes D, and so on, and even, in a circular fashion, Z pushes A; hence the motion is continued, like the trucks in a railway train or the endless motion of a revolving belt. But it is manifest, says the Philosopher, that in such a case all the members, whatever the exact sequence may be, would have to be in motion simultaneously, or at rest simultaneously, and hence when the original movent ceases to move the series all movement would instantly cease. The process of *antiperistasis* on this ground alone, not to mention other defects, fails therefore to explain the continued motion of the single thrown body after the original act of throwing has ceased. Hence, observes Aristotle, we must look elsewhere for the explanation of the thrown body.¹⁶

It is not the continued *movement* of the medium which explains the movement of the projectile; this only pushes back the problem one step, since we still have to explain the continued movement of the medium. The continued local movement of the medium must be ruled out as the source of the projectile's continued motion: yet the source must lie with the medium in some way, since the medium is the only possible

¹⁴ *Physic.* 266 b 27-30 (Oxford ed.).

¹⁵ *Physic.* 215 a 15; 266 b 30 f.; 267 a 16 f.; etc. Ross' Commentary on the *Physics* of Aristotle may profitably be consulted on *antiperistasis* and related matters.

¹⁶ It is remarkable that so well-informed an historian as Pierre Duhem should have been mistaken about the Aristotelian doctrine on this matter. He attributes, quite wrongly, the absurd theory that the moving air impels the projectile, to Aristotle. In fact, as we have seen, Aristotle is at pains to show how untenable such a theory must be (cf. *Leonardo*, t. 3, préf., p. vi, etc.).

source of the projectile's continued motion after it has left the thrower, so the Philosopher writes.¹⁷

Thereafter while we must accept this explanation [*antiperistasis*] to the extent of saying that the original movent gives the power of being a movent either to air or to water or to something else of the kind, naturally adapted for imparting and undergoing motion, we must say further that this thing does not cease simultaneously to impart motion and to undergo motion: it ceases to be in motion at the moment when the movent ceases to move it, but it still remains a movent, and so it causes something else consecutive with it to be in motion, and of this again the same may be said. The motion begins to cease when the motive force produced in one number of the consecutive series is at each stage less than that possessed by the preceding member, and it finally ceases when one member no longer causes the next member to be a movent but only causes it to be in motion. The motion of these last two—of the one as movent and of the other as moved—must cease simultaneously, and with this the whole motion ceases.¹⁸

In another place the Philosopher sums up the theory of the continuance of violent motion in a succinct manner when he says: "the force transmits the movement, to the body by first, as it were, impregnating the air. . . . If the air were not endowed with this function, constrained movement would be impossible."¹⁹

The original violence initiates the movement and gives to the circumambient medium the power of continuing it; however this is a transient power, and diminishes and finally fails, whereupon the violent movement ceases and the projectile falls.

It would appear that we must recognize in the medium not only a propulsive but also a resistive agency; the medium offers different resistance to the body's movement according as the medium is more or less easily divided by the body.²⁰ Thus, we

¹⁷ *Physic.* 267 a 2-12.

¹⁸ It is instructive to compare this process described by Aristotle, of combined motion and power of giving motion, with wave progression: e.g., the spreading ripples produced on the surface of a pond when a pebble is thrown in. We shall have more to say on this matter hereafter.

¹⁹ *De Caelo* 301 b 25-29.

²⁰ *Physic.* 215 a 30, etc.

can throw a stone more readily in air than under water. We shall further consider this twofold action of the medium later in connection with natural motion.

St. Thomas fully agrees with the foregoing doctrine of Aristotle. In the section of this *Commentary on the DE CAELO* to which we have previously referred,²¹ St. Thomas lays down, that in the violent movement of a stone the mover impresses motion only while it is in contact with the stone. Nevertheless, because air is both subtle and light it is susceptible to impressions. Consequently, when the violence of the mover desists, the air in contact with the stone continues to propel the stone, and gives also propulsive power to the conjoined air, which in its turn propels the stone, and so on. Consequently the first violence endures in the stone to all appearance, but really the stone continues to move because of the successive impressions of the air. Hence, if there were no such bodies as air, there would be no violent motion—*si enim non esset tale corpus quale est aer, non esset motus violentus*.

Aristotle and St. Thomas are unanimous that movement in a void, if such could exist, would be impossible.²³ In a void there would be no motivating medium to cause motion; nor would there be any determinate direction for movement, so that there could be no directed motion, which is absurd.²⁴ A stone could not be thrown from the hand nor an arrow shot from the bow in a void, if there were such.

This principle is the antithesis of the doctrines of original impetus (of which more in a later place) advanced by Buridan, Descartes, Newton, etc. According to the impetus doctrine, motion in a void is not only possible but is the most free of all

²¹ *III de Cael. et Mund.*, lect. 7.

²² Let us remark here that the so-called "vacuum" obtained by pumping the air out of a vessel is not to be regarded as a void, but rather as a medium of rare lightness and subtlety in which both natural and violent motions proceed with facility under the influence of the aethereal medium. A suggestive similitude will be found in the theory of "wave mechanics," a subject we shall discuss later.

²³ *Physic.* 215 a 18.

²⁴ *Ibid.*, 215 a 23.

motions and persists indefinitely; the function of the medium for the impetus theory is merely to retard motion.

The Principal Agent and its Instruments.

St. Thomas embarks on an interesting discussion of motion in the *De Potentia*.²⁵ He compares the continued movement of the arrow with the retention by the semen of the force originally imparted to it by the soul. This comparison has sometimes been taken to mean that St. Thomas subscribed to a theory of impetus for moving bodies.²⁶ In truth, however, it cannot be thus interpreted. Let us consider St. Thomas' words:

An instrument is understood to be moved by the principal agent so long as it retains the power communicated to it by the principal agent; thus the arrow is moved by the archer as long as it retains the force wherewith it was shot by him. Thus in heavy and light things, that which is generated is moved by the generator as long as it retains the form transmitted thereby: so that the semen also is understood to be moved by the soul of the begetter, as long as it retains the force communicated by that soul, although it is in body separated from it. And the mover and the thing moved must be together at the commencement of but not throughout the whole movement, as is evident in the case of projectiles.

It will be evident in the first place that St. Thomas' comparison here between the semen and the projectile is somewhat general, and is not to be taken in an unduly literal manner. The force impressed on the semen is more firmly attached to its nature than is the violent motion of an arrow. Furthermore, St. Thomas holds that the form of heavy and light bodies is not the *cause* of natural local motion, but is its *principle*, as he relates in the *Contra Gentiles*:²⁷ the form determines the place to which the body has a tendency, the actual movement to that place must have another and external cause, namely, the im-

²⁵ *De Pot.*, q. 3, a 11, ad 5.

²⁶ So, apparently, Garrigou-Lagrange: *God: His Existence and His Nature*, I, 274 f. Dominic Soto, O.P. (1494-1560), the celebrated Spanish philosopher and theologian, invoked this discussion of St. Thomas' to support, it is said, an impetus theory of motion. Cf. Duhem, *Leon.* t. 3, p. 286 f.

²⁷ *III Cont. Gent.*, c. 23.

pulsion of the medium. Thirdly, even the continued force of the semen is dependent upon a suitable medium to preserve that force,²⁸ as indeed is manifestly the case with the preservation of any living thing.

In this discussion in the *De Potentia* St. Thomas does not refer to the action of the surrounding medium because here he is taking that action for granted. With the semen the retention of the force given to it by the soul of the begetter depends on the proper medium to conserve and apply that force. So with the arrow: the retention of the force given to it by the archer requires the participation of the medium, to preserve in itself the impression for as long as is proper, and to guide the arrow to the place determined by the original act of the archer.

St. Thomas is primarily concerned in this discussion with the fact that a body receives its power from the original agent, and retains it for a time after it leaves that agent; the arrow does not take off on its own account, nor does the semen acquire its force except from the begetter. The medium cannot originate the movement, only the initial act can accomplish this; but the force or impulse once given by the principal agent, the medium's function is to take up the subordinate task of carrying out the movement; so the movement persists after the body has separated from the principal agent. Thus, the captain directs and the sergeant sees that the direction is carried through. The whole movement depends on the initial act of the principal agent and is executed by the instruments of that agent under the agent's direction. Failure to achieve the end laid down by the principal agent is due to the defectibility of the instruments.

On the primacy of the principal agent St. Thomas writes: "An effect is ascribed more especially to the direction of the first mover towards the end than to the instruments which receive that direction."²⁹ Thus he can continue: "The arrow

²⁸ An interesting case may be found in the modern practice of artificial insemination in animals which often requires the prolongation of the force of the semen beyond its ordinary span. This is accomplished by providing a suitable medium at a favorable temperature.

²⁹ *III Cont. Gent.*, c. 24: "How even things devoid of knowledge seek the good."

receives its direction to a fixed end through the impulse [*ex impulsione*] of the archer, so, too, natural bodies receive an inclination to their natural ends from their natural movers [the heavens], from whom they derive their forms, powers and movements," without in any way implying a doctrine of impetus. In the impetus doctrine no instrumental agent is required to continue the original action; in St. Thomas' doctrine a continuous hierarchy of movers is required.

Thus in no way in his doctrine of local motion does St. Thomas weaken the force of the principle that whatever is moved is moved by another.

The Attenuation of Violent Motion.

Why does the arrow finally fall? Why does its flight not continue indefinitely under the influence of the propelling air when once started by the archer? In considering this question we should see it in its more general content: always we perceive that the nearer a thing is to its cause the more powerful is the effect of that cause. Thus the nearer a body is to a fire the hotter it is; the heat of the fire is actual and it moves the neighboring body from potency to act, so that heat becomes actual in the body. The nearer the body to the fire the greater is this effect, and consequently the hotter the body becomes.³⁰ So, a man who knows arithmetic teaches it to another, and the more conscientiously the pupil applies himself, the more does he learn.

Duhem cites an illuminating passage from al Bitrogi, the disciple of ibn Rushd, in which the attenuation of violent motion is compared with the general inward radial attenuation of motion in the cosmos, al Bitrogi writes: ³¹

[the stone and the arrow] continue to move, but by means of a virtue which remains applied to the stone or to the arrow after the projector has launched it; the more the arrow is separated from its

³⁰ On the doctrine of heat see, for instance, the last paragraph of *III Cont. Gent.*, c. 69 (cf. Aristotle, *Physic.* 255 a 23). It will be evident that this doctrine of heat differs fundamentally from the theory of heat held in modern "Kantian" physical science.

³¹ Duhem, *Leon.*, t. 2, p. 191.

motor, the more feeble the virtue becomes. As this virtue is consumed when the arrow falls, so the virtue that the Supreme Mover confers on the inferior spheres diminishes continually until it comes to the Earth which remains naturally immobile.

An influence radiating from a central point through a hierarchy of agents is attenuated and divided and diversified the farther removed it is from the center.³² This is true whether we consider a state or a transition, whether the spreading ripples caused by dropping a pebble into a pond, or the cosmos as a whole proceeding from God.

The general principle illuminates such diverse things as the imperfection and contingency of the sub-lunary world and the inferiority of man's intellectual powers to the angel's. The eventual fall of the arrow; the crumbling of the old house; the impotency of seeds kept too long; the gradual cooling of hot bodies when the fire is removed; each of these processes of decay may be hastened or retarded in its own way according to the surroundings; but its ultimate extinction is as certain as the imperfection of terrestrial affairs compared with celestial.

Natural Locomotion.

Heavy bodies, like earth, tend to their natural place which is below, and light bodies, like fire, to their natural place which is above. How are we to account for these natural downward and upward movements? The Philosopher had to expend a considerable amount of intellectual effort on this subject. It is clear in the case of violent motion that the motion derives from the motor agent which initiates the movement. But how are we to identify the agent responsible for the natural upward and downward motion of the elements?

It would almost seem that these bodies have within themselves some spring of movement;³³ although this cannot literally be so, yet the appearance of autonomous motion must be accounted for. Aristotle examines the matter minutely in *VIII*

³² *III Cont. Gent.*, c. 64; *Summa Theol.*, I, q. 89, a. 1, etc.

³³ *De Caelo* 308 a 3; 310 b 25, etc.

Physic., 4: When light and heavy things are in motion to positions which are the reverse of their natural places, i. e., when heavy bodies are thrown up, and light bodies down, their motion is violent, and the source of the violent motion is manifest. When, however, these bodies are in motion to their proper places, the heavy down and the light up, their motion is natural. Whence comes this natural motion?

The natural motion is not self-sufficient, since we know that whatever is moved by another. Nor can it be like the movement of animals which is *prima facie* self-sufficient; in the case of animal motion one part causes motion in another separate part, and thus the whole is moved; this is possible only because the animal is composite, having active parts which move passive parts. A stone, however, is one and continuous and without differentiated parts, so that its motion can have no source like that of animal motion. Furthermore, Aristotle points out very cogently,⁸⁴ if the stone's natural motion were animal-like, then it would be in the stone's power to stop itself, or to move in any direction, both of which animal characteristics are absent from the stone. Thus a falling stone and a bird differ radically in their behavior.

The problem of natural motion is solved by Aristotle by a close examination of the implications of the notion of potency. Let us consider the Philosopher's words:⁸⁵

One who is learning a science, potentially knows it in a different sense from one who, while already possessing the knowledge, is not actually exercising it. Wherever we have something capable of acting and something capable of being correspondingly acted on, in the event of any such pair being in contact, what is potential becomes at times actual: e. g., the learner becomes from one potential something another potential something: for one who possesses knowledge of a science but is not actually exercising it knows the science potentially in a sense, though not in the same sense as he knew it potentially before he learnt it. And when he is in this condition, if something does not prevent him, he actively exercises his knowledge.

⁸⁴ *Physic.* 255 a 5 f.

⁸⁵ *Ibid.*, 33 f.

So, too, in the case of natural bodies; as witness a cold body which becomes hot and thereupon burns, unless something prevents it; likewise a heavy body when generated will realize its proper activity and descend, and a light body rise, unless something hinders the movement. Thus, a pile-driver at the bottom of its stroke illustrates the first state of potency, at the top the second, and the release from the top allows its proper motion of descent to occur. So, a trigger releases an activity in the gunpowder; likewise an archer when he releases the drawn bow.

Hence we see that the natural motion of heavy and light things to their respective places is the completion of the original action on the removal of some hindrance which has up to that moment been preventing the last stage of the activity. Thus we may appropriately ascribe these natural motions of bodies to the generator which initially brought the heavy and light bodies into existence, and again successively, to that which releases the hindrance.⁸⁶

We can see now why it is that these bodies appear to have within themselves some spring of movement. The appearance of autonomous motion derives from the fact that natural locomotion of light and heavy bodies to their natural places is the last transition to full being for such a body; in its natural place becoming is at an end and the body enjoys its proper being and completion.⁸⁷ Now, the appetite of matter towards its form is the greater as its state is the more perfect,⁸⁸ the natural appetite of inanimate things for their proper end being like the will or intellectual appetite in intellectual substances.⁸⁹ Consequently, the more perfect the state the less is the external influence needed for the natural motions of the heavy and the light; hence the appearance of a spring of movement within the body after the generator and the remover of hindrances have performed their functions.

St. Thomas confirms Aristotle's judgment on natural motion.

⁸⁶ *Ibid.*, 256 a 1.

⁸⁷ *De Caelo* 310 b 32 f.

⁸⁸ *III Cont. Gent.*, c. 22.

⁸⁹ *Ibid.*, c. 88.

He renders the theory more precise even than the Philosopher left it. Thus, in the *Contra Gentiles* we read: ⁴⁰

Simple forms do not cause movement, they are principles of movement, since natural movements, like all other natural properties, follow from them. . . . The form is the principle of local movement inasmuch as to a particular body in respect of its form, is due a particular place, to which it is moved by virtue of its form, which tends to that place; and because the generator gives this form, it is said to be a mover. Thus, it is due to fire, in accord with its form, to be in a higher place.

And again: ⁴¹

As the arrow receives its direction to a fixed end through the impulse of the archer, so, too, natural bodies receive an inclination to their natural ends from their natural movers, from whom they derive their forms, powers, and movements.

There is thus a close analogy between one who releases a catapult and one who pulls away a pillar supporting a roof. Just as it is necessary to attribute to the circumambient medium an agency whereby motion is continued after the projectile leaves the catapult, so, too, it appears that we must attribute to the medium the propulsion which maintains the downward motion of the falling stone. Although this downward motion is in accordance with nature, and not by constraint, yet there must still be a separate mover to move the body to the completion of its act. Likewise with the heavenly bodies, the fifth element of which they are composed undergoes circular motion by nature, but yet, it must be so moved by an external intelligence.

In the case of violent motion the medium, under the action of the initial motor, moves the body against its natural motion; in the case of the falling body the medium is acting in accord with nature; nevertheless a propulsive medium is necessary in both kinds of motion. In violent motion the medium propels the body to the goal designated by the initial motor violence; in natural motion the goal is determined by the form of the body, and the medium assists the body to reach its natural goal.

⁴⁰ *Ibid.*, c. 23.

⁴¹ *Ibid.*, c. 24.

Furthermore, with violent motion the speed diminishes to zero as the source is left behind and the goal is approached, while with natural motion the speed generally increases as the body comes nearer to the goal;⁴² since the body's appetite for its form grows as it approaches its end as a hungry man approaching his dinner.

Again, with violent motion, the greater the body the more effort is needed to move it, while with natural motion the heavier the body the faster does the body descend; and likewise the greater the bulk of a light body the more rapidly does it ascend, as, for instance, a mass of fire. "Whenever bodies are moving with their proper motion, the larger moves quicker," says Aristotle.⁴³

Summing up, then, we conclude that for natural motion *Form* is the principle of the movement determining the destination, and the *Cause* is, in successive orders, the generator, the remover of the obstacles, and the circumambient medium.

The Functions of the Medium in Natural Motion.

If the universe were infinite there would be no up or down or middle, and hence no natural motion, which is contrary to experience. If there were a void, since there is no difference in nothing, there would again be no up or down, and hence no

⁴² *Physic.* 230 b 25; *de Caelo* 277 b 7, etc.

⁴³ *De Caelo* 290 a 1; cf. 273 b 32; 277 b 4; 308 b 20, etc. The assertion that heavier bodies fall faster than lighter bodies is often referred to by modern authors as a point on which the Peripatetic philosophers were mistaken, and that Galileo, by his experiments with falling bodies, proved the ancient philosophers to be in error by showing that all bodies, small or great, fall together.

This dispute is, however, somewhat insubstantial. To put the matter in Newtonian language, the Galileans are referring to an artificial or "ideal" case of a free fall under gravity without resistance; then (by definition) all bodies fall with equal acceleration, e.g., independent of mass. The Aristotelians, on the other hand, are referring, not to an "ideal" fall, but to an actual natural fall; again in Newtonian language, the viscous resistance of the medium (in accordance with Stokes' Law $R = 6\pi\eta va$ for a sphere of radius a and velocity v) causes a falling body to attain a constant "terminal velocity," the value of which is greater for larger bodies. Hence in Nature heavier bodies do in fact fall faster; a proposition which is indeed manifest to common sense, and which certainly did not escape the vigilant eye of the Philosopher.

natural motion, so the void too is impossible.⁴⁴ Thus we rule out Newton's infinite structureless universe. But there is another reason for rejecting the existence of a void, i. e., a space containing nothing: there would then be no propellant agent for violent motion, nor for natural motion, so that no locomotion would occur, which is manifestly absurd. Conversely, we can argue that in a thinner medium motion occurs more readily, and hence in a void motion should occur at infinite speed.⁴⁵ The notion of a locomotion through a space devoid of a medium is thus antinomous and absurd from whatever viewpoint we consider it.

It is apparent that in the motion of a body the action of the medium is two-fold: (1) propulsion, (2) resistance. In Newtonian doctrine the action of the medium is merely retarding (as expressed quantitatively in Stokes' Law); in Peripatetic doctrine the medium is primarily propulsive and secondarily resistive. Thus a stone falls more rapidly in water than in treacle; it is propelled to its proper destination by the medium in both cases, but it cleaves the water more readily than it cleaves the treacle, and hence moves more rapidly.⁴⁶

That the motion through the medium is a combination of propulsion and resistance is recognised in Newtonian physics in an oblique way: the density of the medium is regarded as the propellant factor, in that it modifies gravity, as, for instance, in the case of a bubble of air rising in water; the viscosity of the medium is regarded as the retardant factor.

It is a curious paradox in the Newtonian system that we must artificially view the rise of the air bubble in the lake, and the fall of the stone in the lake, as fundamentally different; the fall of the stone as primary, and the rise of the bubble as secondary. In Peripatetic physics both processes are viewed together; the water in each case assists the body to its natural place, i. e., up or down, subject to the water's retarding influence.

⁴⁴ *Physic.* 215 a 5 f.

⁴⁵ *Ibid.* 215 b. Note also: on the Newtonian treatment, from Stokes' Law, as viscosity $\rightarrow 0$, terminal velocity $\rightarrow \infty$.

⁴⁶ *Ibid.* 215 a 30.

The case of the airplane is instructive; (1) We must fill the fuel tank, i. e., give the machine its initial virtue, or it does not move (its ordinary motion not being natural). (2) Air is necessary for its subsequent propulsion by means of the rotating propeller. (3) Air is responsible at the same time for retarding the motion. The air both propels the flying-machine and retards it. Similarly for the flight of birds, and for the water in the case of a man swimming; so to in a marked manner for the swerving flight of a spinning tennis ball.

What of the case of rocket propulsion? On Newtonian physics the air in this case contributes nothing to the propulsion but is merely retarding, so that a rocket airplane should travel with greater facility when beyond the Earth's atmosphere. Rocket propulsion *in vacuo* is closely related to natural fall in an evacuated vessel. These so-called *vacua* are not voids; we must regard them as filled with a rare medium under the propulsion of which motion takes place more readily than in air; in these conditions the rocket-propelled airplane moves more rapidly; likewise the guinea and feather in the famous experiment fall in the evacuated vessel with equal velocity, and more rapidly than in air.

The False Doctrine of Impetus.

The doctrine that a body once set in motion continues to move by its own impetus without further outside aid is the antithesis of the Peripatetic doctrine that for locomotion, as for all motion, the continuous action of an external mover is necessary. The doctrine of impetus or inertia has been held universally in physical science since the seventeenth century, and constitutes one of the principal articles in the revolt against Aristotelian science. However justified such a doctrine might be for the peculiar domestic purposes of modern physical science, which is a pragmatic *simulacrum* of the real science of Nature, the impetus doctrine is absurd if regarded as an article of the real science of physics.

The seventeenth century revolt against Peripatetic principles

of physics was prepared in the fourteenth century by the Nominalist philosophers at the University of Paris, notably by Jean Buridan and Nicolas Oresme. The doctrine of impetus has a longer history than this, however; it can be traced back at least to Johannes Philoponus the grammarian and philosopher of Alexandria (c. 500 A.D.).

In his *Commentary on the Physics of Aristotle*,⁴⁷ Philoponus discusses the physics of local motion and advances the impetus doctrine in opposition to Aristotle's doctrine that the medium is propellant. For Philoponus, the medium is merely resistive and exercises no propellant function; the impetus given to the thrown body suffices to continue its motion until the resistance to motion offered by the medium brings the body to rest. It will be evident that in this doctrine of Philoponus we have the implicit denial of the general principle that whatever is in motion is moved by another.

The critical case in distinguishing Aristotle's doctrine from the impetus doctrine is motion in a void. According to the Aristotelian principle a body could not move through a void with either natural or violent motion because there is no propellant and no destination. According to Philoponus' impetus doctrine, motion through a void would occur with the greatest facility, since there is nothing to impede it; no propellant is needed and destination is determinate initially and not finally.

Philoponus discusses at some length the theory of *antiperistasis*, believed by some to account for the continuance of the forced motion of a projectile; the supposed process whereby the air moving round behind the arrow by some means pushes the arrow forward. Like Aristotle before him, Philoponus decides that *antiperistasis* and its variants are incapable of explaining the facts of forced motion. Unlike Aristotle he concludes that therefore we must dismiss the notion of the air as propellant. Thus he writes: ⁴⁸

⁴⁷ Selections in English translation will be found in M. R. Cohen and I. E. Drabkin, *Source Book in Greek Science* (New York, 1948), pp. 217-223.

⁴⁸ Cohen and Drabkin, *loc. cit.*

From these considerations and from many others we may see how impossible it is for forced motion to be caused in the way indicated [i. e., by the motion of the air]. Rather is it necessary to assume that some incorporeal motive force is imparted by the projector to the projectile, and that the air set in motion contributes either nothing at all or else very little to this motion of the projectile. If, then, forced motion is produced as I have suggested, it is quite evident that if one contributes motion contrary to nature, or forced motion, to an arrow or a stone, the same degree of motion will be produced much more readily in a void than in a plenum. And there will be no need of any agency external to the projector. . . .

We have seen that the Philosopher likewise found that *anti-peristasis*, or any doctrine that relies entirely on the *local movement* of the medium, is inadequate to account for violent motion. We must recognize that what the projector imparts to the medium is primarily a *power of giving motion*, and any local movement of the medium itself is incidental. Philoponus appears to overlook this distinction; hence, having dismissed the movement of the medium as inadequate to account for the violent motion of the projectile, he mistakenly supposes that the only alternative is the impetus of the projectile; he advances this principle in spite of the fact that the impetus doctrine is nonsense metaphysically.

Philoponus' criticism thus fails to reach the essence of the Peripatetic doctrine of the function of the medium; the Philosopher's doctrine of local motion is unshaken.

The Impetus Doctrine of Buridan.

The impetus doctrine was revived in the fourteenth century at the University of Paris⁴⁹ by the Nominalist philosophers under the leadership of Jean Buridan, Rector of the University

⁴⁹ It is mainly due to the labors of the great French savant, Pierre Duhem, in the early years of the present century, that the doctrines concerning the natural sciences current in the fourteenth century have been rescued from oblivion. The doctrine of impetus has since been recognized in the work of the Dominican, Robert Kilwardby, in the thirteenth century, and, it is claimed, in some of the Arab philosophers. It would seem that this pernicious error, like all aberrations and heresies, is always lurking, awaiting an opportunity to show itself.

(c. 1340).⁵⁰ Buridan held that all locomotion, whether terrestrial or celestial, is governed by impetus. Buridan is the parent of the mechanistic theory of the universe in its modern cycle. His doctrines developed and spread steadily until they were taken up with enthusiasm in the seventeenth century and have been *de rigueur* well-nigh ever since in scientific circles.

In one of the sections of his *Quaestiones* on the *de Caelo* of Aristotle,⁵¹ Buridan discusses local motion. He maintains that the theory of impetus accounts for the facts much better than does the Aristotelian doctrine of a propellant medium:

"Finally we ask the question," he writes, "whether, when a stone is thrown or an arrow is shot from the bow in like cases, it is kept moving after leaving the projector by virtue of some power intrinsic to it or by virtue of some extrinsic cause."

Buridan argues first that the air offers a resistance to the moving body and hence, he claims, it cannot be the propellant. But we have already discussed this matter and seen that there is no impediment to the notion of the air filling both roles in different phases of its operation; so a swimmer could not be propelled without the water, and at the same time experiences a resistance from the water.

Next, Buridan brings forward the old objection that if moving air keeps the projectile moving, what keeps the air moving? This objection is, however, beside the point in considering Peripatetic doctrine, since Aristotle likewise dismissed this theory as absurd and advanced the quite different doctrine that the air is given not a movement, but the power of being a mover.

Buridan goes on to discuss *antiperistasis*, and points out its inadequacy to account for projectile motion; he recognises, too, that the Philosopher did not accept the doctrine of *antiperistasis* as an explanation of the motion of projectiles. In

⁵⁰ Buridan is popularly remembered today in connection with the psychological dilemma of "Buridan's ass." But he was a man of wide learning and wrote extensively on all branches of philosophy.

⁵¹ Johannis Buridani, *Quaestiones super libris quattuor de caelo et mundo* (ed. E. A. Moody, 1942) bk. III.

refuting the *antiperistasis* doctrine Buridan puts forward the interesting cases of the revolving hoop and the smith's grinding stone: it is manifest that in such motions of revolution, since the air is not being cleaved, *antiperistasis* with regard to the air brings no solution to the problem of the continuance of revolution for some time after the agent which set them revolving has ceased to act.

Has the air any other influence on the persistence of revolution? Buridan proposes a number of experiments: for instance, if you take a cloth and drive away the air contiguous to the revolving wheel you do not thereby stop the revolution. This, and other tests of a similar character, Buridan believes, suggest that the air is not concerned with the maintenance of the rotation.

It should be pointed out, however, that the argument from the rotating wheel is somewhat oblique in its significance. For rotational motion is not motion directed to a place, and is therefore of a radically different character from rectilinear motion. It is indeed the nature of the heavenly bodies to revolve unceasingly in circles, propelled by the intelligences directing them. But there is no *natural* circular motion beneath the sphere of the Moon: the only circular motion found on Earth is accidental or artificial, e. g. whirlpools, wheels of vehicles, etc. Natural motion on Earth is rectilinear, up for light bodies and down for heavy bodies, which thereby obtain their natural places of rest and completion. This being so, the rotation of a wheel or a grindstone is not, strictly, violent, since it is not the opposite of a natural rotation.

Hence in investigating the violent motion of an arrow the example of the wheel is not directly relevant. Supposing it were true that a wheel set rotating would continue to rotate for some time *in vacuo* (if there were such). This would in no way establish that a projectile would continue to move *in vacuo* without a propellant medium, nor that a natural movement of rise or fall would take place in a void where destination and propellant alike fail.

In fact, however, we can see that a wheel could not continue to rotate in a void when the operator has ceased, any more than a stone could be thrown in a void. A propellant medium must be at work for the continuance of rotation as for translation, although we do not fully grasp its mode of action. Buridan is correct in maintaining that the process of contained rotation is not one of *antiperistasis*; but, while the exact process escapes us, the necessity for a propellant is evident from first principles.

Aristotle, after laying down that in violent rectilinear motion the medium has a propellant power conferred upon it by the motor which persists for some time before attenuating to zero, wisely desists from speculating into the precise mode of operation of this power. So, too, we must leave open the case of the rotating wheel as regards the mode, while being assured of the principles.⁵²

Buridan, however, has no metaphysical scruples in abolishing the need for a separate mover in accounting for the motion of the projectile. Thus he continues:

Therefore, since these appearances and many other things cannot be saved by that opinion [the motive power given to the air], I rather believe that the mover impresses on that which is made to move not only the movement but equally some impetus or some power or some quality—it does not matter by what name it is called. This impetus, however, has the natural capacity for moving that on which it is impressed, just as the magnet impresses on the iron some power which makes the iron move to the magnet.⁵³ And insofar as the motion of the mover is quicker, so also is the impetus more intense; and that impetus in the projectile or arrow is certainly being diminished by the resistance contrary to it until it can no longer make that projectile move. If you should find some other way of saving Aristotle's opinion and the appearances at the same time, I should gladly adhere to it.

Thus we have the impetus theory or locomotion laid down

⁵² The effect of rotation on the flight of a golfball is interesting in this connection: It is admitted on all hands that the swerve of the spinning ball is due to the air; the further claim of the Peripatetic physics is that the translational motion, too, is due to the air.

⁵³ *Physic.* 267 a 2.

explicitly. In his *Quaestiones* on the *Physics* of Aristotle, Buridan applies the principle of impetus to the movement of the heavenly bodies.⁵⁴

By means of the principle of impetus Buridan bridges the disjunction which had formerly been held well-nigh universally between the celestial and terrestrial realms. For Buridan, all local movement is governed by impetus, whether it be of the arrow or the revolving star. He thereby abolished the distinction between the four terrestrial elements with radical natural motion and the fifth element of the heavenly bodies with circular natural motion; at the same time he abolished the doctrine that the heavenly bodies are propelled by motor intelligences or angels. All is now subject to the reign of impetus.

At the Creation, Buridan contends, God set the heavens in motion; they have continued in those motions ever since by virtue of their impetus. Because of this automatic motion God no longer needs to make special provision to propel the heavens, and indeed this is Buridan's exegesis of the statement in Scripture that God rested on the seventh day.

Buridan's doctrine of original impetus thus leads to a fundamentally different conception of the governance of the world from that entertained by St. Thomas. For the latter, God is the first cause of all being and all activity in the world; not merely the first cause in time, but the first cause immediately in the hierarchy of being and action, both efficiently and finally; indeed, the world may not have been created in time at all (St. Thomas contends that this cannot be known from creatures, but rests on Revelation), but God would still be the first cause of everything in Nature. Buridan puts God's principal function into the creation of the world at some epoch in the past; God's role since then, as Buridan sees it, might be likened to that of a retired monarch who contemplates the autonomous evolution of the world he started; the constant governance of the world by Divine Providence is thus implicitly denied.

This aberrant teaching about the locomotion in the world

⁵⁴ Bk. VIII, q. 12 (cf. Duhem, *Leon.* t. 3, p. 34 f.).

flowed outwards from the University of Paris in a great wave of naturalistic philosophy, and became the parent of the mechanistic philosophy and cosmologies of later centuries.

II

LOCAL MOTION IN MODERN PHYSICAL SYSTEMS

We have considered the nature of local motion as revealed in the *philosophia perennis*, and remarked the aberrant doctrine of impetus. The impetus theory of locomotion, propounded by the nominalist philosophers of the University of Paris in the fourteenth century, became one of the fundamental articles of the new physical science of the seventeenth century. This doctrine of impulse has, seemingly at least, remained fundamental to physics throughout its evolutions until our day. However, closer inspection of the systems of physics prevailing since Newton reveals that the principles of locomotion found in those systems are more equivocal than might appear at first sight. Modern or 'Kantian' physics, by its own pragmatically governed development, has forsaken the simple impetus principle of Newtonian mechanics, and in our time, under the name of "wave-mechanics," has produced a theory of locomotion which is remarkably analogous in form to the Peripatetic principles, albeit without the inner substance possessed by those principles.

The evolution of the theory of locomotion illustrates a general characteristic of Kantian systems: under their innate utilitarian impulsion they tend to evolve into fragmentary and spectral counterparts of the real hierarchical science of nature.

The Peripatetic and the Newtonian Systems.

It is remarkable that the action of the circumambient medium should have been rated so low by the later Scholastics and the seventeenth-century physicists. It is manifest that the medium exercises a very potent influence on local motion: drop a stone in air and then in treacle and observe the difference in

its motion. To dismiss this difference as merely secondary is patently quite artificial and *ad hoc*.

We have seen that in the Peripatetic doctrine sub-lunary local motion is due to a) the medium, which has a propulsive and a resistive function; b) in natural motion, the form of the body determining its destination; c) in violent motion, whatever force is communicated initially by the violent agent to the body and the medium. In the case of the motion of the heavenly bodies these external factors are replaced by one: the motor intelligence.

The Newtonian picture of the universe is fundamentally different from the Aristotelian. Newton's universe is an infinite void containing discrete, mutually gravitating, massive particles obeying the three laws of motion. The behavior of these particles is considered to be determinable mathematically from any given initial configuration by the application of the infinitesimal calculus which Newton propounded to be a necessary *ancilla* to his system of physics.

The feature which appears immediately as the direct antithesis to Aristotle's universe is that Newton's space is an infinite undifferentiated void; while for Aristotle space has a structure: it is a finite sphere with a determinable center and periphery, and every corporeal body in the world has its own natural place within that sphere, which place it constantly strives to attain if it does not already reside there. Hence, for Aristotle, all locomotion must have an end or goal; it cannot continue indefinitely or to infinity; without a determinate goal there could be no natural locomotion; no body could be moving to a place at which it could never arrive.⁵⁵ Thus, contends the Philosopher, the universe can be neither void nor infinite, since in either case there would be no natural movement in the world, which is a manifest absurdity: if it were infinite there would be no middle nor up nor down, i. e., no differentiation in space; and similarly, if it were void, the void being nothing, and there being no difference in what is nothing, there would once more

⁵⁵ *De Caelo* 274 b 15; 277 a 27, etc.

be no differentiation; and in both cases there would in consequence be no natural places for bodies to seek, and hence no natural motion.⁵⁶

Further, continues the Philosopher, if the universe were either infinite or void or both, then "no one could say why a thing once set in motion should stop anywhere; for why should it stop *here* rather than *here*. So that a thing will either be at rest or must be moved *ad infinitum*, unless something more powerful get in its way."⁵⁷

Some two thousand years later Newton was to announce the same theorem in his *Principia* as his first law of motion; the foundation stone of the Newtonian system was the very proposition which Aristotle had advanced as a *reductio ad absurdum*.

Newton, after laying down a model of the universe as an infinite void proceeds to enunciate the first law of motion for the bodies contained therein: "Every body continues in its state of rest, or of uniform motion in a right line, unless it is compelled to change that state by forces impressed upon it."⁵⁸

It will be observed that Newton preserves the notion of natural motion, but for him natural motion is of quite a different character from Aristotle's natural motion. Indeed, we have the paradox that Newton's "natural" motion never occurs in Nature, since there is no body in the universe completely free from external forces. The fall of the stone and the ceaseless revolutions of the heavenly bodies, which for Aristotle exemplify natural motions, are for Newton forced motions.

We have remarked that the strength of Newtonian and allied systems of physics is pragmatic rather than rational. The system of Newton, insofar as it may profess to rest on principles of a philosophical nature, has little to recommend it; the principles which are implicit in Newton's fundamental theorems are evasive and eccentric. The true character of this system will be rendered more evident by viewing it in a wider context of physical theories.

⁵⁶ *Physic.* 215 a.

⁵⁷ *Ibid.* 215 a 20.

⁵⁸ Newton, *Principia Mathematica* (tr. Motte, ed. Cajori), p. 131.

Theories of Light.

Newton extended the principle of the motion of particles to several branches of physics, and notably to the theory of light. He envisaged light as a stream of corpuscles emitted from the luminous body; the corpuscles impinging on the retina of the eye give rise to the sensation of vision. These corpuscles obey the laws of motion, and by making various assumptions the elementary phenomena of optics, rectilinear propagation, reflection, refraction, etc., were readily accounted for.⁵⁹

However, Newton's contemporary, Huyghens, proposed quite a different theory concerning the nature of light. Huyghens envisaged light not as a stream of corpuscles but as waves spreading from the source, as the ripples on the surface of a pond when we throw in a pebble. In the wave theory, too, the elementary properties of light were readily explained.⁶⁰

From the seventeenth century to the early nineteenth century the corpuscular theory of light was generally adhered to. But early in the nineteenth century, chiefly owing to the work of Young and Fresnel on the phenomena of interference, the wave theory replaced the corpuscular theory in popular acceptance.

The later development in the theories of light are too well known to require lengthy description; we shall merely recapitulate the basic characteristics in order to discuss their significance.

Towards the end of the nineteenth century, commencing with the study of the photo-electric effect, corpuscle-like properties came to be recognised in light as well as wave-properties. In the year 1900 Max Planck was obliged to introduce his celebrated quantum theory of radiation to account for the shape of the energy distribution in the radiation from black bodies. According to the quantum theory, radiation is not emitted from the source in a continuous manner but is discontinuous in space and time, i. e., it is emitted, not as spreading waves, but as

⁵⁹ Newton, *Opticks* (1st ed., London, 1704).

⁶⁰ Christian Huyghens, *Traité de la Lumière* (Leiden, 1690).

“bundles” or quanta. Each quantum has an energy of $h \nu$ erg, where $\nu \text{ sec}^{-1}$ is the frequency of the radiation, and $h \text{ erg. sec.}$ is Planck’s constant.

From this and subsequent developments, the quantum theory of radiation became firmly established. Light was regarded as having a dual nature: in some respects it was wave-like, and in other respects particle-like. But there was as yet no satisfactory bridge between the two natures.

From about the year 1925 onwards it came to be recognised that matter also has a dual nature; in some respects matter behaves like particles and in other respects like waves. This discovery was due to the experimental investigations of Davisson and Germer and of G. P. Thomson on the diffraction of electron beams and to the theoretical work of de Broglie on the close analogy between the equations of optics and mechanics.

If we have a stream of particles each of mass $m \text{ gm.}$ moving with a velocity of $v \text{ cm. sec}^{-1}$, then the associated wave length of such a beam is given by the equation

$$\lambda = \frac{h}{mv}$$

where h is Planck’s constant. The wave properties of a beam of electrons are determined by this relation, and likewise for all moving bodies; for instance, a rifle bullet in flight has its associated wave whose frequency is thus determined by the bullet’s mass and velocity.

Thus by about 1925 it was generally recognized that both matter and radiation have dual natures: in some respects they are particle-like and in other respects wave-like. This duality was still a contradiction, however, since as yet the wave and particle theories were merely juxtaposed as alternatives rather than integrated into a unified theory.

The Characteristics of the Two Systems.

We see then that from the seventeenth century until the first

quarter of the twentieth century two patterns were normative in theories of physical science, namely waves and particles:

(1) *Waves*. These were held to owe their movement entirely to the medium; the source merely initiates the disturbance and thereafter the medium takes charge. So, when we drop a stone into a pond and create spreading waves, the behavior of the waves is determined by the medium, namely the water. (More specifically in this case by gravity and surface tension). This total dependence on the medium is clearly shown by the well-known equation for the velocity of transmission of elastic waves in a medium; thus:

$$\text{vel.} = \sqrt{\frac{\text{modulus of elasticity of medium}}{\text{density of medium}}}$$

(2) *Particles*: These were held to owe their movement entirely to themselves in accordance with Newton's first law of motion, once an impetus is imparted to them initially by the source. A homogeneous medium plays no part in the transmission of the particles except to act as a hindrance.

Wave and Particle Theories and the Peripatetic Doctrine.

It is most instructive now to compare the theories of wave propagation with the Peripatetic doctrine of local motion. The Peripatetic theory holds that local motion is due intrinsically to a combination of (1) the motive influence of the medium, and (2) the influence of the source in violent motion and the goal in natural motion.

In violent motion the motive cause initiates the movement and gives to the medium the power of continuing the movement to its intended destination, as when the archer shoots the arrow at the target. In natural motion, when the hindrance is removed, the body moves under the intrinsic motive power of the medium to its proper destination; it generally increases in speed as the goal is approached owing to its growing appetite for completion and rest as it nears its end.

It appears then that the wave and particle theories of classi-

cal physics may be regarded as, in form, two fragmentary extremes separated off from the Peripatetic doctrine. The Peripatetic physics envisages both the activity of the medium and that of the source or goal; the wave theory concentrates entirely on the medium, the particle theory entirely on the source.

The theories of locomotion in classical physics may thus be described as *polar* with respect to Peripatetic physics. The theory of light since the seventeenth century has oscillated between the two poles and has recently become ambivalent. The theory of matter has recently undergone a similar transformation.

The Theory of Wave Mechanics.

After 1925 the dual nature of both light and matter had become firmly established. The next step was to solve the antithesis by means of a unified theory. This was accomplished in the mathematical structure now known by the titles of "wave-mechanics" and "quantum-mechanics"; they were due to the labors of a number of theoretical physicists, notably de Broglie, Schrödinger, Heisenberg, Dirac, etc. Schrödinger was able to show that the abstract "quantum-mechanics" of Heisenberg was mathematically equivalent to his own system of "wave-mechanics."⁶¹ Accordingly we need consider here only the system of wave-mechanics.

The wave-mechanics brings the wave and corpuscular aspects of light and matter together into a higher synthesis. As we might expect from such a synthesis, in view of the polarization of classical theory, the general pattern of wave-mechanics is manifestly aligned with the Aristotelian doctrine of locomotion; albeit that the inspiration of the modern system is pragmatic, its character partial, and its substance a *simulacrum*, whereas the ancient system is truly hierarchic and real.

This formal approach to the Peripatetic doctrine of locomotion has come about in the course of the natural evolution

⁶¹ E. Schrödinger, *Annalen der Physik*, 79, 1926, "On the relation between the Quantum Mechanics of Heisenberg, Born and Jordan, and that of Schrödinger" (Eng. tr., *Coll. Papers*, London, 1928).

of pragmatic physics; an approach which could scarcely have been dreamt of by nineteenth-century physicists with their horizon narrowly bounded by the disparate wave and particle theories. The physicists of the seventeenth century by failing to observe the artificial character of the new theories of physics were alienated from the ancient science of nature.⁶² But in the twentieth century with the substitution of wave-mechanics for Galilean-Newtonian mechanics, the *prima facie* conflict between the new and the old principles is substantially reduced, and so the historic pretext for the unreasoning rejection of the Aristotelian natural science loses its force.

The theory of wave-mechanics is principally the creation of Louis de Broglie, extended by the work of Schrödinger.⁶³ The object of his work de Broglie expressed thus:

Under pressure from the results of experiments, physicists have been obliged to admit that the old dynamics, even when enlarged by relativistic ideas, could not interpret phenomena involving quanta. Today it appears necessary to create a new mechanics closely connected with the theory of waves. This is the idea which I have been endeavoring to work out for some years, and which the recent beautiful work of Schrödinger has rounded off and extended.
 . . .⁶⁴

The object of the wave-mechanics is to create a synthesis embracing both the dynamics of a material particle and the theory of waves as conceived by Fresnel. On the one hand, the effect of this synthesis must be to introduce the idea of points of concentration of radiant energy into optics, an idea which at present seems to be required by the recent results of experimental physics; on the other hand, it must introduce the conceptions of the theory of waves into

⁶² There were a few more in the seventeenth century, such as Cardinal Bellarmine, who suspected the equivocal character of the new sciences. But little heed was paid to their judicious counsel.

⁶³ De Broglie unfolded his new theory in a doctorate thesis in 1924, followed by a series of papers. The most interesting of these papers, translated into English, will be found in de Broglie and Brillouin, *Selected Papers on Wave Mechanics* (London, 1928).

⁶⁴ De Broglie, "The Principles of the New Wave Mechanics" (1926), *Selected Papers*, p. 55.

our picture of material particles in order to account for the occurrence of quanta in mechanics, and for intra-atomic phenomena.⁶⁵

De Broglie founded his system on the remarkable parallel between the classical dynamics of a material particle and the theory of geometrical optics.⁶⁶ He postulated a fundamental connection between waves and corpuscles in order to explain the equivalence of the laws. Thus he associated the propagation of waves with the motion of all the different kinds of elementary particles; he took the particles to be points in the wave where in some way energy is concentrated, so that the laws of wave propagation are fundamental, and the dynamical laws governing the motion of a particle are deductions from the laws of wave propagation. The dynamics of light quanta were taken to be the limiting case of the dynamics of 'material' particles when the velocity approaches the constant c .

The wave-mechanics of de Broglie was extended by Schrödinger who developed the fundamental equation governing the propagation of the waves in terms of the wave function ψ . This system gives an integral theory in which particles and quanta are everywhere guided by ψ -waves. The wave function ψ thus becomes the fundamental entity in modern physics.

Wave-Mechanics and Newtonian Mechanics.

The system of wave-mechanics supersedes Newtonian dynamics for the motion of bodies. Insofar as the Newtonian dynamics is successful the two systems give identical results. Thus, in the case of the deflection of a beam of electrons by an electric field we have the two interpretations:

(1) In the Newtonian system, the force exerted by the field on the charge of the electron deflects the electron which pursues a curved path of a radius at each point determined by the magnitude of the deflecting force.

(2) On the wave-mechanics system, we consider not the electrons, but the guiding waves. When the ψ -waves enter the field they are changed in wave-length (by an amount corre-

⁶⁵ *Ibid.*, p. 133.

⁶⁶ *Ibid.*, p. 9.

sponding to the changed electron velocity), i. e., the waves are refracted like light entering a block of glass. The electric field is analogous in its action to an optical medium of continually varying refractive index, and the ψ -waves are accordingly deflected in a path the curvature of which is easily shown to be identical with the curvature of the path in which the electrons are bent on the Newtonian principles. Thus the two interpretations give identical results in this simple case; so, too, with all the phenomena which were successfully treated by Newtonian dynamics. But the wave-mechanics covers also a multitude of phenomena to which classical theory does not apply. Hence the Newtonian mechanics appears as a peculiar and circumscribed system which leads to the same results in some specific cases as does the more powerful wave-mechanics which rests on such radically different foundations.

It will be observed that in the ψ -wave theory the locomotion of a body at each point in its path is attributed to the action at that point of what we can only call, whether figuratively or literally, the medium in which the waves reside. This action of the medium is in turn determined by the initial conditions under which the locomotion commenced and any other conditions imposed *en route*. This theory of locomotion is thus quite alien to the Newtonian theory where locomotion is continued by the quality of impetus and is not due to the activity of the medium, which functions only as a retardant. The wave-mechanical theory must also be distinguished from a simple wave-theory where motion is attributed entirely to the local action of the medium with no regard to the influence of that which commenced the motion. Wave-mechanics combines the virtues of both wave and particle notions.

It might be remarked that Newton's invocation of the force of gravity, combined with impetus, now appears as a substitute for the immediate propulsive or guiding action of the medium in natural motion. It should be noted that Einstein in his theory of General Relativity has likewise abolished the notion of a force of gravity and replaced it by notions of the geometry

of a space-time continuum. Development after Newton led to the invocation of electric and magnetic fields; however, the paths of charged bodies under electric and magnetic forces cannot be accounted for in the Einstein manner by the properties of the space-time field. It seems likely that the ψ -wave theory will fill this lacuna, so that electric and magnetic actions, as well as gravity, will be completely subsumed into a general theory of the action of the medium: de Broglie and Einstein are the rightful successors of Faraday.⁶⁷

The system of wave-mechanics was developed in the first place with a view to elementary particles such as electrons. However, it seems that the same principles should be applicable to the macroscopic world; that we should envisage the flight of the arrow or the cannon ball as due to the guidance of ψ -waves. The wave-mechanical theory for the macroscopic world still awaits development. Many questions suggest themselves. For instance, what is the connection between sound-waves in the air accompanying a cannon ball and the ψ -waves? What of ultra-sonic waves? When such questions are answered we shall be further advanced toward a general mathematical theory of locomotion; and it seems likely that the more perfect such a general theory becomes merely under the impulsion of its own utilitarian charter, the more the plan which emerges will resemble the far-seeing wisdom of the Peripatetic principles of locomotion.

The theory of wave-mechanics is far removed from the uncompromising rigidity of the impetus theory of locomotion, with its denial of the motive-power of the medium, as advocated by Buridan, Galileo, and their successors. The extravagant subservience to the impetus theory, which has prevailed since the seventeenth century, is now left without support. In the χ -wave theory physics has returned to the notion of immediacy in the cause of locomotion.

⁶⁷ Cf. de Broglie, "The Universe of Five Dimensions and the Wave Mechanics," *Selected Papers*, p. 101. Lest it be thought paradoxical that such a professedly "phenomenalist" physicist as Einstein should be seen as akin to such "realist" as

Wave-Mechanics and Peripatetic Physics.

The Peripatetic doctrine of locomotion rests on immutable grounds of general experience; no subsequent particular observations can either invalidate or validate it, although such observations may help to enrich our insight into the general doctrine. Consequently it is not to be thought that wave-mechanics establishes Aristotle's doctrine, any more than we could believe Newton's system really overthrows the Aristotelian principles. Rather the reverse is true; the more universal judges the more particular.

From the point of view of the pure science of nature, the wave-mechanics is interesting because it represents a formal approach from within modern Kantian physics to the established Aristotelian principles of nature. Physics underwent its pragmatic revolution in the seventeenth century. Thereafter it pursued success without regard to the real nature of the world; the ruthless external Procrustean method gave it great power.

Nevertheless, in view of the hierarchical nature of the world, the true system of natural science, if it could be sufficiently grasped, would be itself the most fertile and productive of all systems. The Kantian external physics is a short-cut to power from a different starting-point, but we would expect that ultimately the path of Kantian physics would turn towards the real physics and become an inferior image of the real science. Hence the interest of the wave-mechanics to the philosopher of nature.

After the initial violent break-away of the Galilean-Newtonian system, setting up the Kantian external physics, three centuries of evolution in the theory of locomotion have brought us to a point closer to the real physics than ever before. Is this merely a chance resemblance, or is it a permanent approach to the goal? If the latter, then it should suggest that the evolution of modern physics is approaching its end. However,

Faraday, let it be pointed out that the meeting of seemingly opposite extremes is no uncommon occurrence in philosophical systems.

we should be cautious. There have been, in the past, many *prima facie* and ephemeral approaches to various aspects of Peripatetic physics: for instance, in the statement in mechanics that potential energy tends to a minimum we might see a resemblance to the purposeful character of Aristotle's natural science. Such resemblances are, however, little more than fortuitous: the content of the same theorem can be expressed in other and quite non-Aristotelian language. As an item in Kantian physics the theorem has no metaphysical significance. The case of the wave-mechanics, on the other hand, seems to represent a much more substantial convergence.

Whatever be the future course of physical science, the hold which the Galilean-Newtonian principles of motion obtained in the seventeenth century has been broken irrevocably. The strangely prevailing opinion that Galileo and Newton showed Aristotle's physics to be untenable can scarcely be defended any longer. The Aristotelian science of nature can once more be pursued dispassionately, and with it the whole perennial philosophy of the world.

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NAMING GOD IN ST. AUGUSTINE'S *CONFESSIONS*

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“HOW shall I call upon my God?” With this question St. Augustine launches the fundamental search recorded in his autobiography—a book named as much for its efforts to confess God’s praise as for its admissions of sin and error on the part of the penitent-saint. By isolating this primary aspect of the *Confessions*—the proclaiming of God’s praise—we can make some discoveries about the author’s way of naming God, a way which in some important respects had no precedent among other early Christian writers.

To the opening query, rephrased to read, “What art thou, my God?” Augustine gives a tentative answer in a series of affirmations—four superlatives, “most high, most excellent, most potent, most omnipotent,” and a long list of paradoxical attributes, which seem alternately to affirm and to deny: “most hidden, most near . . . unchangeable, yet changing all things . . . never new, never old . . . always working, yet ever at rest . . . changing thy ways, leaving unchanged thy plans.”¹

In the last four books of the *Confessions*, which contain the praise of God in creation, this search to state some of the divine attributes comes into focus. It is mainly through the developments in these closing books that St. Augustine is able to give an unhesitant answer to his initial question and to end on the confident assertion: “But thou, being the Good, needing no good, art ever at rest, because thou thyself art thy rest.”² Who shall teach man to understand this, he asks; but he no longer fumbles for a fitting name for God nor suggests that this attribution in itself does not express the truth.

With the single view of discerning to what extent this solution to his initial problem rests on philosophical principles,

¹ *Confessions*, I, 4.

² *Ibid.*, XIII, 37.

we shall examine St. Augustine's handling of God's attributes in the *Confessions*, with particular attention to the final books. Within these four books it is not immediately evident that the author is approaching any unified resolution of his question, for he gives a name or assigns an attribute to God two hundred and ninety-eight times, with the most frequently repeated one, "truth," recurring only twenty-six times with nine variations among these twenty-six.

Such varied calling upon God has led many to speculate on the divine attribute which seems most central to St. Augustine's thought, but the answers have no striking unanimity. Father Portalié says that this central attribute is extreme simplicity.³ Father Fulbert Cayré believes that Augustine holds special predilection for the attributes of wisdom and goodness.⁴ E. Logos points out that the saint will break the thread of any controversy and begin again if he is in danger of understating the pivotal attribute of immutability,⁵ an opinion concurred in by Vernon J. Bourke.⁶ And Father Capello says that, apart from assertions made to combat error, divine providence and the presence of God in all things are the attributes preeminently stressed, at least in the *Confessions*.⁷ In another work of the saint's mature years he himself gives an answer that at first, at least, seems unrelated to the climactic ending of the *Confessions*: for in the *De Trinitate* out of twelve attributes selected from many more he states that wisdom seems adequate to contain them all.⁸ Thus Augustine himself introduces complexity into the question of the divine attribute most central to his thinking.

³ P. Portalié, "Augustin (Saint)," *Dictionnaire de Théologie Catholique*. Vol. I (Paris: 1939), col. 2328.

⁴ Fulbert Cayré, *La Contemplation Augustinienne* (Paris: André Blot, 1927), p. 251.

⁵ E. Logos, "La Pensée de Saint Augustin," *Revue de Théologie et de Philosophie*, 39-40 (1906), 279.

⁶ Vernon J. Bourke, *Augustine's Quest of Wisdom* (Milwaukee: Bruce, 1945), p. 97.

⁷ S. Aurelii Augustini, *Confessionum*. Edited by J. Capello (Rome: Marietti, 1948), p. xxxii.

⁸ *De Trinitate*, XV, 6.

Speculation on this point follows from the fact that the proper *ratio* of each divine attribute differs from the proper *ratio* of any other. However, since all of these attributes are materially identical among themselves because each is identical with the divine essence, the fundamental problem may be approached by asking what St. Augustine says of God's being, of God in Himself. This is, in fact, the aspect which Gilson finds central to Augustine's thinking: though he begins each approach to God through the notion of truth, it is towards the God of Exodus that he directs his steps—towards being in its plenitude, the "stability" in the essence, the immutability, the eternity which is not considered in any way as an attribute but as the very substance of God.⁹

Gilson finds this ascent to being intrinsically beyond the reaches of a Plotinian metaphysics, which Augustine knew and used, while admitting that in many respects the language in which the saint speaks of God betrays his Hellenic indebtedness:

What happened to Augustine is only too clear. . . . The God of Augustine is the true Christian God, of whose pure Act of existing nothing better can be said than: He is; but when Augustine undertakes to describe existence in philosophical terms, he at once falls back upon the Greek identification of being with the notions of immateriality, intelligibility, immutability, and unity. Every such thing is divine. . . .¹⁰

But, as Gilson himself notes of Augustine (and even more specifically of Dionysius, the pseudo-Areopagite), if one is to remain true to the leading principle of Plotinus one may not affirm of the transcendent First Principle that it is a being—because "to be" is conceived of as something limited whereas the transcendental One of Plotinus is without form or limit.¹¹

⁹ Étienne Gilson, *Introduction à L'Étude de Saint-Augustin* (Paris: J. Vrin, 1943), 2^{ème} édition, p. 27.

¹⁰ Étienne Gilson, *God and Philosophy* (New Haven: Yale University Press, 1944), p. 60.

¹¹ Étienne Gilson, *Being and Some Philosophers* (Toronto: Pontifical Institute of Mediaeval Studies, Revised Edition, 1952), p. 34.

Hence, it is necessary for Augustine to depart from a key point of Plotinian thought when he considers the Transcendent God as being and as being without limit. Plotinus had proceeded by identifying the intelligible with essence, and essence, thus knowable, with being. Augustine, on the other hand, accepts the truth that God is beyond man's comprehension but asserts, nonetheless, that God is—for so he would read in Exodus 3:14: "Tell them that He Who Is hath sent thee." How can his metaphysical principles encompass this new truth, wherein being will be identified with the Transcendent One and Good—and not bounded by what in our experience is the exhaustively "intelligible"? Does he violently yoke together a Christian concept and Plotinian terms?

It would seem, indeed, that he really uses the Plotinian central notions of unity and immutability in his efforts at thinking about the Supreme Reality. He can say, as a Christian or as a neo-Platonist, that the Supreme Reality is one, good, eternal, and unchangeable. But when he wishes to assert of God, the Christian God, that He is Beauty, then he must, whether by philosophy or faith, think in the framework of a notion of being not found in Plotinus.

In the thought of Plotinus beautiful forms are in flux and unite with matter only as imperfectly as images unite with the water or glass which passively receives them.¹² The external beauty around us is made up of changing times and variations; and in this context it connotes restlessness rather than rest, for all of its attractiveness.¹³ Hence, it cannot simply and immediately correspond to an archetype of beauty in the divine order, such as unity and goodness would seem to, for example. How does St. Augustine reconcile the focal notion of immutability with the enigmatic attribute of beauty so that he can say that beauty is paradoxically ever the same, ever renewed: "Too late have I loved thee, O Beauty, ever old and ever new."¹⁴ Exemplarity alone is not a satisfying explanation—for how

¹² *Enneads*, 3, 6, 7.

¹³ *Ibid.*, 7, 22.

¹⁴ *Confessions*, X, 27.

can the immutable God encompass the exemplars of those beauties which are fair because they are changing?¹⁵

Let us see how Augustine goes about the resolution of this problem by looking at his assertions (1) about God in Himself; (2) about God's attributes as they correspond to the chief attributes of the intelligible essences of a Plotinian metaphysics; and (3) about beauty in particular, as an attribute which is difficult to reconcile with immutability and which therefore calls for a substantially different idea of being.

When Augustine speaks of God in Himself, he says again and again that He spoke His name in Exodus—His incommunicable name which is "He who is,"¹⁶ made equivalent in an approximate rendering as *idipsum*. What is *idipsum* except that which is, that which God meant when He said to Moses, "I am who am . . . Tell them He who is hath sent thee."¹⁷ Augustine seems to chant this name of God in a triple refrain in the twelfth book of the *Confessions*: "Thou, therefore, O Lord, who art not one thing in one place, and otherwise in another, but *idipsum* and *idipsum* and *idipsum*."¹⁸ As in this exclamation God in Himself is said to be unchangeable with regard to place, so in another passage God is set off from all else (even created wisdom) because nothing else is *idipsum*: "Hence comes it so to be of thee, our God, as to be manifestly another than thou, and not *idipsum*?"¹⁹ Finally Augustine plainly

¹⁵ Plotinus had thus referred to the seeming inextricability of beauty and evil: "It [evil] appears necessarily, bound around with bonds of beauty, like some captive bound in fetters of gold." (from *Enneads* 1, 8, 12). See Wm. R. Inge, *The Philosophy of Plotinus* (New York: Longmans, 1948), p. 22.

¹⁶ "Dei nomen proprium. Jam ergo angelus, et in angelo Dominus, dicebat Moysi quaerenti nomen suum, *Ego sum qui sum*. Dices filiis Israel: qui est, misit me ad vos. Esse, nomen est incommutabilitatis." (St. Augustine, *Sermon VII*, 7). Cf. *Enarrationes in Psalmos* 101, 10: "Quid vocaris? . . . Ego sum. Quis? Qui sum. Hoc est nomen tuum?"

¹⁷ "Quid est ergo *idipsum*, nisi quod est? Quid est quod est? Quod aeternum est. Nam quod semper aliter atque aliter est, non est, quia non manet: non omnino non est, sed non summe est. Et quid est quod est, nisi ille qui quando mittebat Moysen, dixit illi: *Ego sum qui sum*? (Ex. 3: 14)." (St. Augustine, *Enarrationes in Psalmos* 121, 3). Cf. also note 16.

¹⁸ *Confessions*, XII, 7.

¹⁹ *Ibid.*, 15.

asserts identities between *idipsum* and magnitude, knowledge, and unity: "... in itself a limit to Itself yet illimitable; whereby it is, and is known to itself, the unchangeable *idipsum* by the abundant magnitude of its unity."²⁰ Significantly this same way of naming God is linked with the notions of peace and rest, anticipating the final answer which Augustine gives to his search for the divine name ("thou thyself art thy rest"): "O in pace! O in *idipsum*! ... And you are in the highest degree *idipsum*, who changest not ... and in thee is rest. . . ."²¹ We see, therefore, that each time St. Augustine returns to the self-naming of God in Exodus he acknowledges also God's essence, His self-identity, and often His immutability.

How then does he speak of those attributes which he names separately though they are one substance? Eternity, immutability, and unity are asserted as belonging properly to God alone. Wisdom, truth, and goodness, since they are by their nature immutable, since in their light man judges and takes counsel, are referred without hesitation substantively to God as their first principle wherein they truly are.²² But when St. Augustine speaks of God as present to all creatures, he uses words which carry more than a slight suggestion of Plotinian influence, such as fountain (*fons*) and light (*lux* or *lumen*).²³ But particularly in the attribution of beauty to God, perhaps for the reasons advanced above, the saint becomes involved in the difficulty of keeping the notion entirely spiritual and free from any hint of variation and mutability. He faces at the outset of the *Confessions* the paradox between beauty and

²⁰ *Ibid.*, XIII, 11.

²¹ *Ibid.*, IX, 4.

²² Cf. *De Genesi ad Litteram Liber Imperfectus*, 1, 2: "... id est Sapientiam et Virtutem suam consubstantialiam sibi et coaeternam. . . ."

²³ Cf. *Confessions*, III, 10: "ad fontem tuum"; *ibid.*, XIII, 16: "fons vitae"; *ibid.*, X, 34: "ipsa est lux, una est." In *De Civitate Dei*, VIII, 9-10 he says that the Platonists knew that God was the "causa constitutae universitatis, et lux percipiendae veritatis, et fons bibendae felicitatis." Although it is not always clear whether light is God or created light in some contexts, it is evident that sometimes at least both *lux* and *lumen* are used as names for God.

change when he calls God "most beautiful yet most strong," which is almost in apposition to the correlative phrase, "unchanging yet changing all things."²⁴ Again, he explicitly admits that when he still conceived of God as in some way a body, it was by way of magnitude and beauty—qualities which he took to be divine attributes in a corporeal sense:

I tried so to understand, O my God, thy wonderful and unchangeable unity as if thou hadst been subjected to thy own greatness and beauty. But a body is not great or beautiful because it is a body, seeing that if it were less great or beautiful it would still be a body.²⁵

A step in the spiritualization of this notion of beauty is achieved by noting that in one sense the beauty of things is in the order of the whole: "All beautiful bodies also express this, that in the well-ordered union of the whole there is a far higher degree of beauty, even though the members be individually beautiful."²⁶ At another time he says that God is beauty in a supremely higher degree than are creatures: "They are beautiful, but Thou art unspeakably more beautiful."²⁷ Again, there is a sense in which God is not only the highest beauty among beauties but the very "beauty of all things beautiful,"²⁸ as surely as He is Truth. Or from a related point of view the beauty of all things is thought of as their voice whereby they praise God—a voice which utters its praise whether or not men trouble themselves about questioning these beautiful creatures: "nor will they alter their voice (that is, their beauty)."²⁹ But this discovery follows in Augustine's case only after a period of confusion between transient beauty and spiritual unchanging beauty: "I could not . . . discern that beauty to be embraced for its own sake, which cannot be discerned with the eye of the flesh, it being visible only to the inner man"; and this "inner beauty" is opposed to restlessness and change, for the passage concludes, "and thou alone art rest."³⁰ Indeed, there is a law of beauty above the mind

²⁴ *Confessions*, I, 4.

²⁵ *Ibid.*, IV, 16.

²⁶ *Ibid.*, XIII, 28.

²⁷ *Ibid.*, XII, 20.

²⁸ *Ibid.*, III, 6.

²⁹ *Ibid.*, X, 6.

³⁰ *Ibid.*, VI, 16.

whereby mutable things are to be judged—a law made equivalent to unchangeable truth;³¹ and they alone understand the beauty of creatures “who compare that voice received from without with the truth within.”³² A further reason for praising God lies in this: that that beauty which is above our minds and for which we long as our rest is in a way conveyed into beautiful patterns through the medium of the hands of artists.³³ These men, he observes, learn the art of judging beautiful things but not of using them. This artistic creation is an analogue of the work of God's creation, which is completed only by the formation of interior beauty in the soul by the Word of God.³⁴ Such a concept is governing Augustine when he asserts that he failed to find beauty among the beautiful forms around him because he was not himself interiorly beautiful; he was deformed rather than conformed to that Beauty which is God.³⁵ But the most revealing assertion is that in which he says that he rose above even that power of his mind for judging the beauty of all things and beheld in a momentary flash that which is.³⁶ Such an insight as this one supports his direct statement in the *De Trinitate* that beauty may be safely equated with wisdom as its equivalent and both with God.³⁷ This is in harmony with expressions recurring in the commentaries on the Psalms—such as when he exclaims: “God is Beauty—the Word with God.”³⁸ Hence, the lament, “Too late have I loved thee, O Beauty, ever old, ever new” is a resolution of the enigma which beauty presented—an enigma not offered by truth or goodness—that this late-discovered beauty (in a spiritual sense) is somehow impervious to change, somehow eternally renewable. Yet even with all this insight it is God as Beauty which Augustine expressly states is beyond

³¹ *Ibid.*, VII, 17.

³² *Ibid.*, X, 6.

³³ *Ibid.*, 34.

³⁴ Cf. *Enarrationes in Psalmos* 95. 7; 148. 15.

³⁵ *Confessions*, X, 27.

³⁶ *Ibid.*, VII, 17.

³⁷ *De Trinitate*, XV, 6.

³⁸ *Enarrationes in Psalmos* 44. 3.

our conceiving; under this aspect we see God only in an enigma, in the mirror of the heavens.³⁹

Some, though not all, of these ideas had been stressed by the neo-Platonists. Unity and immutability, important to the thought of Augustine's Hellenic predecessors, had been identified with being, as we have seen; but the Transcendent One was not being but a "beyond-being." Plotinus had said that the things of the world speak of their divine origin by their beauty, though he had not rooted this voice of praise in a free creation.⁴⁰ He had further observed that the beauty of art communicates itself to the artist and from the artist to the matter;⁴¹ that true beauty is wisdom;⁴² and that true beauty is to be identified with the divine intelligence.⁴³

In summary, then, we might ask (1) what has St. Augustine done by way of positive contribution towards expressing the essence and attributes of the Christian God in metaphysical terms; and (2) where does he stand in the tradition of his near contemporaries in the attempt?

With regard to the first point it is safe to assert that St. Augustine uses the "I am Who Am" of Exodus as truly a name for God, understood as that which is, the plenitude of being possessed all at once and unchangeably. Negatively, God is not what creatures are, because they have been something which now they are not.⁴⁴ God's immutability is above that even of minds, which are yet in flux in the order of time, but have as their destined beatitude rest in God's eternity. Thus, the "I am who am" may be expressed as an identity with eternity, truth, and love.⁴⁵ In some way, too, "He Who is" is the highest way of asserting God's beauty, though the intuition of this is as yet bound up in an enigma. Again, beauty is

³⁹ *Confessions*, XIII, 15; cf. *Enarrationes in Psalmos* 36. 2: "Servatur ergo nobis nescio quod dulce spectaculum omnino: et si cogitari ex aliqua parte in aenigmate et per speculum potest, dici tamen nullo modo potest pulchritudo illius dulcedinis: quam servat Deus timentibus se (Ps. 30, 20)."

⁴⁰ *Enneads*, 3, 2, 1.

⁴³ *Ibid.*, 1, 6, 9; 5, 8, 3.

⁴¹ *Ibid.*, 5, 8, 1.

⁴⁴ *Confessions*, XI, 4.

⁴² *Ibid.*, 2.

⁴⁵ *Ibid.*, VII, 10.

identified with being, inasmuch as it is the "fetters of gold" which set off evil things from absolute nothingness.

In relation to his philosophical milieu St. Augustine accepts some points and goes beyond others, as appears in his answers to certain questions: (1) Does God exist? Yes, for all that non-being can mean is denied of God; "He Who is" can be spoken with full propriety only of God.⁴⁶ This admission, as we have noted, departs from the neo-Platonic reluctance to say that the transcendent First Principle is a being. (2) Is it fullness of essence rather than of existence that is attributed to God? Formally perhaps yes, since Augustine's distinction between God and creatures is not in the essence-existence relation but in the fact that the creature possesses its essence in times and variations, a distinction which makes it difficult to call God an archetype of beauty. Yet neither must we forget that Augustine searches primarily to give God a *name*—not a designation in the order of essence, but a personal name. St. Ambrose (d. 397) in his commentary on the text in Exodus 3.14 is admittedly reluctant to apply "name" to God's answer to Moses:

What is a name unless that which signifies what is unique, what is not common to other things. . . . Moses asked, "What is thy name?" And knowing his mind, God did not answer with His name but . . . He expressed a fact, not an appellation, saying, "I am Who am."⁴⁷

St. John Chrysostom (d. 407), who brings into focus the teachings of the schools of both Antioch and Alexandria and to whom Augustine makes reference in 421,⁴⁸ accepts but one neo-Platonic concept for God—ineffable—and otherwise draws from Scriptural and Hebraic sources for some forty ways of calling God incomprehensible.⁴⁹ Dionysius is as deeply indebted

⁴⁶ *De Fide et Symbolo*, 4.7.

⁴⁷ *In Psalmum XLIII*, 19.

⁴⁸ Augustine invokes St. John's authority in the controversies with Julian of Eclanum in 421.

⁴⁹ Jean Daniélou, "L'incompréhensibilité de Dieu, d'après Saint Jean Chrysostome," *Recherches de Science Religieuse*, XXXVII (1950), 176-194.

to neo-Platonism in his treatise on the *Divine Names* as is Augustine in the *Confessions*, but it is not clear—though there is between Augustine and Dionysius this striking overlapping in their common use of Christian concepts and Plotinian terms—that the later writer was not overcome by Hellenism.

Somewhere, then, between the almost non-philosophic position of St. John Chrysostom and the philosophic position of Dionysius which led, at least in certain of his followers, straight out of Christian orthodoxy, lies St. Augustine's contribution: to elements of Christian thought essentially different from neo-Platonism he has applied with profit some neo-Platonic philosophic notions. It would seem that the name of God in Exodus, known by faith and perhaps by a grace-aided intuition, served in St. Augustine to lift neo-Platonic notions to orthodoxy by identifying them with Being. Such a procedure, while not, of course, bringing God within a Christian's comprehension, enabled Augustine to be somewhat expansively articulate in naming God.

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THE MEANING OF PHILOSOPHY IN THE HELLENISTIC-ROMAN WORLD

DURING the "classical" period of Greek thought¹ the term "philosophy," as developed in the great speculative systems of Democritus, Plato, and Aristotle, stood primarily for a *fixed conceptual frame* which constituted the theoretical setting for the scientific treatment of detail.² With this first predominantly theoretical meaning of the term, however, there had been early associated a second meaning which dealt with the fundamental problem as well as scientific exploration of man's *practical* interests, tasks, and needs.³

With the disciples of Plato and Aristotle, the purely theoretical interest in philosophy, as far as it was able to survive an essentially antiquarian trend, was directed to various special "philosophies" or sciences which now, in part, assumed the names of their particular subjects. This newly arising theoretical or scholarly interest in the *scientific treatment of detail*, which in itself changed fundamentally the theoretical aspect of philosophy, was stimulated to no small degree by Aristotle's *Organon*.⁴ Philosophy, as it nearly always does in the hands

¹ The "classical period" of Greek speculative thought was definitely the product of a "national" and exclusively Hellenic civilization. The military conquests of Alexander the Great and the subsequent foundings of the empires of the so-called Diadochi threw open the East to the influences of Greek science, art, literature, and philosophy. As a result of this intermingling of East and West, Asia and Hellenic Europe, a novel and distinct civilization developed which is commonly referred to as Hellenistic culture. The term "Hellenistic" is derived from the Greek word *ἐλληνίζειν* (*graecissare*) and actually means "to behave like a Greek," or "to imitate a Greek," in contrast to the term "to be a Greek."

² Cf., in general, A.-H. Chroust, "Philosophy: Its Essence and Meaning in the Ancient World," *Philos. Rev.*, LVI, No. 1 (1947) 19-58.

³ It should be remembered that in Plato's philosophy both theoretical speculation and practical interest were inseparably fused together.

⁴ It might be said that through the logical works of Aristotle, science, or to

of epigones, suddenly came to mean a body of vast and often superficial erudition. Instead of a pursuit of general metaphysical theories or systems devised to *embrace* detail, we encounter now a strong tendency exclusively to promote the study of detail and to develop the special sciences along narrowly defined and delimited lines. This pronounced emphasis on detail, on the other hand, brought about a general indifference towards the basic issues of metaphysics. And this indifference, in turn, became the stronger the more it appeared that useful and fruitful investigations in the special and detailed provinces of factual learning or empirical knowledge were quite possible without entering into profound discussions about metaphysics. Thus a strong theoretical interest in factual knowledge for its own sake developed—with the result that truly philosophical productivity of the metaphysical type became extremely limited.⁵

Aside from this emphasis on scientific detail and scholiasm displayed by the Early Academy and the Peripatus, scientific investigations concerning the proper conduct of life began to emerge in the Post-Aristotelian era as an ever more essential issue and, in many instances, as the sole aim and content of all philosophical speculation. In this fashion the term philosophy gradually acquired the practical meaning of *an art of life* or the *study of human character* based upon scientific principles or doctrines as to the ultimate significance and purpose of human existence. In other words, philosophy came to mean an organized body of moral convictions which attempted to deduce from certain generalized results of human reasoning or experience a rational and reliable guide that might guarantee the happiness of the individual by leading him safely through the vicissitudes of life. This novel insistence on ethico-prac-

be more exact, the sciences had come to realize their own particular processes with the aid of which they could tackle successfully their various specific problems.

⁵ With the exception of the Stoics and the Neo-Platonists or Neo-Pythagoreans, the various philosophies of the Hellenistic-Roman period, although they are somehow related to one major school of thought or another, nearly always display a marked indifference towards metaphysics.

tical issues did not, however, completely dispense with certain theoretical doctrines and speculations which, in substance, were merely modifications of certain metaphysical problems inherited from a more creative past. But such theories, which essentially lacked originality, met with little genuine interest for their own sake. If they were developed at all, they were intended only to furnish a general rational basis for a kind of practical wisdom on which the proper and befitting conduct of life could be securely based. They were intended to provide man with a theoretical foundation for his all-important practical actions.⁶ Hence the key to many of the theoretical doctrines of the Post-Aristotelian period must nearly always be looked for in the prevailing basic conviction that the definition of "the good life" and, accordingly, of "the virtuous life," as well as that of "the wise man," lends itself to theoretical analysis.

In its further development this emphasis on ethico-practical problems gradually but inexorably divulged that mere moral wisdom based solely on human reason and human experience was no satisfactory compensation for religious faith. This realization, in turn, brought about a significant transition from an ethico-practical point of view to a *religious standpoint in philosophy*.⁷ It had its innermost causes in philosophy itself,

⁶ Cf. A.-H. Chrout, *loc. cit.*, 48.

⁷ This new religious mood found its most adequate philosophical expression in Plato's metaphysics. During the last centuries of Graeco-Hellenistic thought Plato became the foremost intellectual and moral guide for all those who attempted to satisfy the ever growing spiritual and religious need through the comforts of philosophy. In this Plato was not only antiquity's great prophet of a more profound moral life—one who was expected by his followers to show man the road back to his heavenly home—but also one of the truly important founders of religion whose real influence, however, was not actually felt until centuries after his death. Compare, for instance, Numenius, in: Eusebius, *Praep. Evang.*, 9.7. Cf. A.-H. Chrout, "The Metaphysics of Time and History in Early Christian Thought," *New Scholast.*, XIX, no. 4 (1945) 335-337. It should also be remembered that the spiritual monotheism proposed by Aristotle had made a deep and lasting impression on subsequent philosophers, and that with the Stoics the ultimate metaphysical issues had led to seeking the basic principles of morals in a divine command.

in that it had become quite evident by now that philosophy as such could not redeem its promise, namely, to give man those deeper and surer insights which are the foundation and prerequisite of all true happiness and real virtue. The rapidly gaining sceptical type of philosophy already had come to the sad conclusion that virtue and "the good life" consist rather in the renunciation of all efforts to know than in knowledge itself. In this the Sceptics could and actually did fully exploit the fact that each and every philosophical school or tradition in the main seemed only to prove the falsehoods and inconsistencies of every other school of thought. In other words, the unavoidable contacts between the different philosophical viewpoints, and the many serious conflicts which arose therefrom,⁸ made it more and more obvious that philosophy by itself could not bring about a state of man's inner peace and contentment. Thus it had to be admitted that even the ideal of "the wise man," as envisioned by the Stoics, could no longer be attained by philosophical or scientific means alone.

Under the impact of this rather disconcerting impression it was finally realized that man by his own unaided intellectual or moral efforts alone could gain neither real knowledge, nor true virtue, nor lasting happiness.⁹ This realization taught man that his most essential interest and deepest yearning had to be transferred from the earthly to the heavenly sphere. A passionate craving for the salvation of the soul (*σωτηρία*), a religious urgency without parallel increasingly made itself felt in the midst of a complete philosophical disillusionment. Philosophy began to seek the ultimate solutions of its problems in religion, while the rising tide of religious interest required a scientific basis and formulation for its convictions. Thus it came about that the demands of traditional philosophy and the needs of religion fused in a new type of *religious metaphysics*.

* * *

The trend to replace general philosophical inquiries with

⁸ Cf. Cicero, *Acad.*, II. 38. 120; *De Nat. Deor.*, 3. 32. 80 ff.; 3. 25-31.

⁹ Cf. Sextus Empiricus, *Adv. Math.*, 7. 159; 8. 316 ff.; *Pyrrhonia*, 1. 164 ff.; 1. 178.

scientific and systematic treatment of detail is first to be noticed in the works of the Academician Speusippus, Plato's nephew and successor in the scholarchate (348/7-339/8).¹⁰ This trend is clearly brought out by Aristotle's remark that,

in order to define and divide one need not know the whole of existence (*ἅπαντα εἰδέναι τὰ ὄντα*). Yet some (*τίνες*) hold that it is impossible to know the *differentiae* (*τὰς διαφορὰς*) distinguishing each thing from every other single thing without knowing every other single thing. And one cannot, they say, know each single thing without knowing its *differentiae*, since everything is identical with that from which it does not differ, and other than that from which it differs.¹¹

This passage should make it quite obvious that the followers of Plato in the Early Academy, although they still adhered in a greater or lesser degree to Plato's metaphysical system, meant by philosophical inquiry the treatment and elaboration of detail rather than the further development and improvement of the solutions to the basic metaphysical problems which they had inherited from their master and teacher.¹²

¹⁰ Cf., in general, F. Ravaisson, *Speusippi Placita* (Paris, 1838); M. Fischer, *De Speusippi Vita* (Rastadt, 1845); P. Lang, *De Speusippi Academici Scriptis* (Bonn, 1911); C. Ritter, *Neue Untersuchungen über Platon*, 327 ff.; E. Frank, *Platon und die sogenannten Pythagoreer*, 239 ff.

¹¹ Aristotle, *Post. Analyt.*, 97 a 6 ff.—The various commentators dealing with this particular passage (Philoponus or Themistius) insist that the term *τινες* (some) refers to Speusippus, although it is quite possible that Aristotle had in mind several other members of the Academy. Cf. M. Wallis, *Joanni Philoponi in Aristotelis Analytica Priora Commentarii*, preface 5, note 4; and the able discussion of this passage in H. Cherniss, *Aristotle's Criticism of Plato and the Academy*, 59 ff.—As to Aristotle's own attitude towards detail in general, see *Metaph.*, 1003 a 23; 1064 b 23; 1005 a 30; 1005 b 8; 982 a 17; 1005 a 25 ff.; 1061 b 11; 1061 a 4; 1061 a 28; 1026 a 20; 1059 b 11; 1061 b 25; 982 b 24 ff.; 982 a 9: "The wise man knows all things as far as possible, although he has no knowledge of each of them in detail." Cf. *De part anim.* 644 b 22 ff.; H. Cherniss, *op. cit.*

¹² Speusippus, according to the testimony of Epicrates (in: Athenaeus, *Deipnosophistae*, 2.59D ff.), busied himself with the classification of animals and plants. Cf. *ibid.*, 2.86C; 3.105B; 4.133B; 7.303D; 9.369A; Diog. Laert., 4.5, where Speusippus is mentioned as the author of the *ἑμμοια*, containing no less than ten books on the classification of animals and plants.—Xenocrates of Chalcedon likewise wrote many works on the detailed sciences. For titles see Diog. Laert., 4.11 ff.; Cicero, *Acad.*, II.46.143.—Heracleides of Pontus, whom Cicero calls the *doctor*

The same scientific treatment of, and emphasis on, detail is also manifest in the writings of the Peripatetic Theophrastus, the successor of Aristotle in the scholarchate (322/1-288/7 or 287/6).¹³ His main efforts consisted not only in expanding in greater detail some of Aristotle's basic teachings, but also in defining more precisely the detailed contents of these teachings.¹⁴ While he generally adhered to the fundamental Aristotelian doctrines, Theophrastus nevertheless attempted to complement, particularize, and departmentalize these doctrines by incorporating into them a vast body of scientific observations. At the same time he tried to apply Aristotle's principles of scientific method to particular and detailed instances or provinces of learning.¹⁵ The same can be said about

imprimis (*Tuscul.*, V. 3. 5; about his many writings, see *Diog. Laert.*, 5. 86 ff.), wrote also on grammar, rhetoric, history, geography, and music. — Philip of Opus, according to the testimony of Suidas, wrote numerous works on mathematics, astronomy, and meteorology. Cf. Plutarch, *Ne suaviter quidem vivi posse secundum Epicurum*, 11. 2; Pliny, *Hist. nat.*, 18. 31. 312; Vitruvius, *De archit.*, 9. 7; Stobaeus, *Eclogues*, 1. 558. — Eudoxus of Cnidus (*Diog. Laert.*, 8. 86 ff.), who became deeply interested in mathematics, astronomy, geography, and medicine, enjoyed a great reputation for his polymathy. It is quite possible that the study and interpretation of Plato's *Timaeus* by his disciples had a definite influence on this pronounced trend in the direction of detailed investigations.

¹³ *Diog. Laert.*, 5. 36 ff.; H. Usener, *Analecta Theophrastea* (Leipzig, 1858); H. Diels, *Theophrastea* (1883); H. Diels, *Doxogr. Graec.*, 102 ff.; E. Howald, "Das Schriftenverzeichnis des Aristoteles und des Theophrast," in *Hermes*, LV (1920) 204-221.

¹⁴ Boëthius, *In Arist. de definitione*, 292: "Theophrastus, ut in aliis solet, quum de similibus rebus tractat, quae scilicet ab Aristotele ante tractatae sunt, in libro quoque de affirmatione et negatione iisdem aliquibus verbis utitur, quibus in hoc libro Aristoteles usus est. . . . In omnibus enim, de quibus ipse disputat post magistrum, leviter ea tangit, quae ab Aristotele dicta ante cognovit, alias vero diligentius res non ab Aristotele tractatus exsequitur."

¹⁵ It should not be forgotten that scientific thought and scientific method actually came into their own through the logical works of Aristotle. For in the *Organon* this method had received those fundamental concepts which made possible a scientific and detailed study of individual phenomena. — Aristotle himself, in what might be considered an "autobiographical" statement, had admitted that the study of detail was something of great importance. *De part. animal.*, 644 b 22 ff.: "Of things constituted by nature some are ungenerated, imperishable, and eternal, while others are subject to generation and corruption. The former are excellent beyond comparison and divine, but less accessible to knowledge. The evidence

Eudemus of Rhodes,¹⁶ the contemporary of Theophrastus, whose numerous works were dedicated partly to an elaboration of the general Peripatetic teachings, and partly to exact and detailed histories of the various special sciences.¹⁷ His main aim seems to have been a faithful appropriation and further expansion of the scientific method devised by Aristotle.¹⁸ Aristoxenus of Tarentum,¹⁹ a disciple of Aristotle, owed his scholarly reputation to his works on music,²⁰ which for accurateness and detailed studies remain unsurpassed in the annals of Hellenic thought. In addition, he was deeply interested in specialized research in the provinces of the natural sciences, psychology, ethics, and politics.²¹ Next to Theophrastus and Eudemus, Strato of Lampsacus (c. 370-c. 268)²² enjoyed the greatest

that might throw light on them, and on the problems which we desire to solve respecting them, is furnished only scantily by sensation. Whereas, as regards perishable plants and animals we have abundant information, living as we do in their midst, and ample data might be collected concerning all their various kinds, if we only are willing to take sufficient pains. Both departments, however, have their special charm. The scanty conceptions which we can attain of celestial things give us, from their excellence, more pleasure than all our knowledge of the world in which we live; just as half a glimpse of persons whom we love is more delightful than a leisurely view of other things, whatever their number or dimensions. On the other hand, in certitude and in completeness our knowledge of terrestrial things has the advantage. Moreover, their greater nearness and affinity to us balances somewhat the loftier interest in the heavenly things that are the object of the higher philosophy."

¹⁶ Cf. L. Spengel, *Eudemi Peripatetici Fragmenta quae supersunt*, 2d edit. (Berlin, 1870); *Comment. in Arist. Graec.*, edit. Acad. Reg. Boruss., indices.

¹⁷ He wrote among others, a *History of Geometry*; a *History of Arithmetic*; a *History of Astronomy*; and perhaps a *History of Theology*. Cf. L. Spengel, *op. cit.*

¹⁸ Cf. Simplicius, *Comment. in Arist. Phys.*, 93 b 18: . . . μαρτυρεῖ δὲ τῷ λόγῳ καὶ Εὐδήμος ὁ γνησιώτατος τῶν Ἀριστοτέλους ἐταίρων.

¹⁹ Cf. W. Mahne, *Diatribe de Aristoxeno philosopho Peripatetico* (Amsterdam, 1793); R. Westphal, *Aristoxenus von Tarent und die Rhythmik des klassischen Hellenentums*, 2 vols. (Leipzig, 1883-1893).

²⁰ His surname was ὁ μουσικός. Cf. Alex. of Aphrod., *Comment. in Arist. Top.*, 49. 22 ff., who considers him the greatest authority on music. Cf. Plutarch, *Ne suaviter quidem vivi* . . . , 10. 95; Cicero, *De fin.*, V. 19. 50; *De orat.*, III. 33. 132; Vitruvius, *De archit.*, 1. 14; 5. 4.

²¹ Cicero, *Tuscul.*, I. 18. 41; Gellius, *Att. Noct.*, 4. 11. 4.

²² Diog. Laert., 5. 58 ff.; Cicero, *Acad.*, I. 9. 34; *De fin.*, V. 5. 13; Simplicius, *Comment. in Arist. Phys.*, 187 a 15 ff.; 225 a 31 ff. Cf. H. Diels, "Über das

reputation as a scholar, scientist, and scholiast.²³ His many writings, which deal with nearly all the domains of learning and human knowledge, are concerned primarily with a penetrating analysis of detail rather than with establishing or expounding a comprehensive philosophical system.

On the whole this general interest in detailed analysis and highly specialized treatment of a definite and restricted body of knowledge bears out the contention that with certain Post-Aristotelian thinkers "philosophy" came to mean the object of any one of the many highly departmentalized empirical sciences.²⁴ Demetrius of Phaleron,²⁵ the disciple of Theophrastus, transplanted to Alexandria this tendency of identifying philosophy with the study and treatment of scientific detail, thus becoming actually the founder of the Alexandrian school of scholiasts. In this he determined the whole of philosophical development for centuries to come.

* * *

While the immediate followers and disciples of Plato and Aristotle predominantly identified philosophy and the general

physikalische System des Strato," in *Sitzungsbericht d. Berlin. Akad.* (1893), 101-127. Strato, whose surname was *ὁ φυσικός*, succeeded Theophrastus in the scholarchate.

²³ Cf. Plutarch, *Adv. Coloten*, 14.3; Pseudo-Galen, *Hist. Philos.*, 2 (p. 228). As to Strato's numerous writings, see E. Zeller, *Philos. d. Griechen*, 3d edit., II. 2.902, note 3.

²⁴ Already during the scholarchate of Aristotle (335/4-323/22), the scientific work of the Peripatetic School was essentially that of an "institute" in which experienced and specially trained scholars joined together in various major research programs. The collecting as well as elaborating and digesting of the many materials gathered from nearly all the fields of human knowledge demanded huge and expertly handled archives, detailed and accurate experiments, and specialized as well as departmentalized experience on the part of each member of this vast but apparently well organized "institute." Thus the "institute" itself had to train its own specialists capable of carrying out, everyone in his own field of research, certain assigned special studies.

²⁵ Cf. C. Ostermann, *De Demetrio Phalerone vita* (part I, Hersfeld, 1847; part II, Fulda, 1857); Diog. Laert., 5.80 ff. — Demetrius went to Alexandria around 297, where he persuaded Ptolemy Soter to found the famous library. It was this huge collection of primary source materials which greatly stimulated philological and historical research.

philosophical task with scientific erudition and the detailed and departmentalized development of the special theoretical²⁶ sciences, the Stoics endowed the term "philosophy" with a *theoretical as well as practical meaning*, the emphasis constantly varying with individual authors. Upon closer scrutiny the general Stoic meaning of philosophy, however, dissolves into three major problems: (a) the practico-teleological nature of philosophy; (b) the definition of what might be called "practical" or deontological, a definition which is carried out with the help of the concept of "rational conduct" based upon right reason; and (c) the substantiation of this rational conduct on the basis of right reason and in conformity with "nature." According to the Stoics, the ultimate purpose of all philosophy—in other words, the nature and function of philosophy—is to be discovered in the fact that it constitutes the true foundation of the moral and, hence, rational conduct of rational man. Seneca informs us that some Stoics considered "the pursuit of wisdom" (*philosophia*) as virtue, while other Stoics are said to have declared it a means of improving one's mind, and others again to have called it the quest for the *recta ratio*.²⁷ Philosophy, therefore, is above all the proper exercise of an art or technique, or to be more exact, the exercise of the highest of arts, namely virtue.²⁸ In short, it is the apprenticeship of virtue through the practice of virtue.²⁹ But virtue, in turn, can only be acquired through the proper exercise of philoso-

²⁶ The Peripatetic Dicaearchus of Messenia, however, puts issues of practical life ahead of theoretical speculation and scholarly research. Cf. Cicero, *Ad Attic.*, 2.16: "Quoniam tanta controversia est Dicaearcho, familiari tuo, cum Theophrasto, amico meo, ut ille tuus τὸν πρακτικὸν βίον longe omnibus anteponat, hic autem τὸν θεωρητικόν." Compare *ibid.*, 7.8.

²⁷ *Epistola*, 89.5.

²⁸ Cf. *Placita philos.*, 1, proem.: οἱ μὲν οὖν Στωϊκοὶ ἔφασαν, τὴν μὲν σοφίαν εἶναι θεῶν τε καὶ ἀνθρωπίνων ἐπιστήμην. τὴν δὲ φιλοσοφίαν ἀσκήσιν τέχνης ἐπιτηδεύου. ἐπιτήδειον δ'εἶναι μίαν καὶ ἀνωτάτω τὴν ἀρετὴν . . . ; Sextus Empiricus, *Adv. Math.*, 9.13: τὴν φιλοσοφίαν φασὶν [οἱ Στωϊκοὶ] ἐπιτήδευσιν εἶναι σοφίας, τὴν δὲ σοφίαν ἐπιστήμην θεῶν τε καὶ ἀνθρωπίνων πραγμάτων.

²⁹ Seneca, *Epist.*, 89.4: ". . . philosophia studium virtutis est, sed per ipsam virtutem. . . ." *Ibid.*: ". . . philosophia . . . studium corrigendae mentis . . . est. . . ."

phy.³⁰ Hence philosophy in general might be called virtue,³¹ and its various parts or departments are nothing other than just as many particular virtues.³² This interrelation of our theoretical or speculative interest in moral goodness and the practical pursuit of the moral good—in other words, this correlation of theoretical moral interest and practical virtue—is also brought out by a remark, ascribed to Chrysippus,³³ that philosophy constitutes something necessary to right reason,³⁴ and that philosophy itself signifies the pursuit of, and devotion to, wisdom (ἐπιτήδευσις τῆς σοφίας).³⁵ Aristo of Chius,³⁶ on the other hand, definitely banished all theoretical speculation from his concept of philosophy by limiting the latter exclusively to ethico-practical problems which were to be solved with the help of a kind of moral intuition.³⁷

According to the majority of the Stoics, which in this seems to follow the Cynic-Socratic tradition, the main issue of all phi-

³⁰ Seneca, *Epist.*, 89. 4. Cf. note 29, *supra*.

³¹ Seneca, quoted in Lactantius, *Inst. Div.*, 3. 15: "Philosophia nihil aliud est quam recta vivendi ratio vel honeste vivendi scientia vel ars rectae vitae agendae. Non errabimus, si dixerimus philosophiam esse legem bene honesteque vivendi, et qui dixerit illam regulam vitae, suum illi [scil. nomen] reddidit." Cf. *Placita Philos.*, 1. prooem., quoted in note 28, *supra*.

³² Cf. *Placita Philos.* 1, prooem. 2: ἀρετὰς δὲ τὰς γενικωτάτας τρεῖς, φυσικὴν, ἠθικὴν, λογικὴν. . . . Diog. Laert. 7. 46: αὐτὴν δὲ τὴν διαλεκτικὴν, ἀναγκείαν εἶναι καὶ ἀρετὴν ἐ εἶδε περιέχουσιν ἀρετὰς. . . .

³³ Isidore of Pelusium, in: *Patrol. Graec.*, 78, col. 1637.

³⁴ H. v. Arnim, *Stoicorum Veterum Fragmenta*, III. 15, 12; 41, 28; 18, 25. Cf. *ibid.*, I. no. 293.

³⁵ Sextus Empiricus, *Adv. Math.*, 9. 13; *Placita Philos.*, 1. prooem. 2. — It should be noted that this definition is originally Platonic. Cf. A.-H. Chroust, "Philosophy: Its Essence and Meaning in the Ancient Word," 31 ff.

³⁶ Diog. Laert., 7. 160 ff.; H. v. Arnim, "Ariston," in: *Pauly-Wissowa*; A. Mayer, "Aristonstudien," *Philolog. Supplem.*, XI (1910), 483-610.

³⁷ Cf. Seneca, *Epis.* 89. 13; 94. 1-12; Cicero, *Acad.*, II. 39. 123; Diog. Laert., 7. 160; 7. 162; 7. 163; Plutarch, *De audiendo*, 8 (p. 42); Sextus Empiricus, *Adv. Math.*, 7. 13; Stobaeus, *Floril.*, 4. 110; 4. 111; 82. 11; 82. 15; 82. 16; Lactantius, *Inst. Div.*, 7. 7. — This "anti-intellectualism" of Aristo is definitely under the influence of Antisthenes and the Cynic tradition in general. As a matter of fact, Aristo, the disciple of Zeno, definitely reverted to the early Cynicism of Zeno which the latter, under the influence of Crates, had professed in his earlier life. Cf. Diog. Laert., 7. 24.

losophy consists in the virtuous life.³⁸ To this paramount problem all other issues of philosophy must remain completely subordinate and subservient. Logic (dialectics) and physics,³⁹ no matter how important they may appear to other philosophers, are, in the opinion of Chrysippus, mere instruments or ancillary topics enabling us to discern between good and evil, between what ought to be done and what ought to be avoided.⁴⁰ Hence, purely theoretical studies undertaken merely for the sake of theory or erudition, are tantamount to an immoral act

³⁸ It might be interesting to remember that Zeno, the founder of Stoicism, came from Cition, a town in the south-eastern part of the island of Cyprus. Cition was for a long time the center of Phoenicio-semitic culture and influence in Cyprus. Diog. Laert. (7.1) calls Cition a πόλισμα Ἑλληνικὸν Φοίνικας ἐποίκουσ. Thus it seems that the original Greek settlers of this town were soon joined by immigrants from Phoenicia. Cicero (*De fin.*, 4.20.56) refers to the inhabitants of Cition as *Phoenici prefecti*, while Diog. Laert. (7.8; 7.15; 7.30; 2.114) calls Zeno an outright Phoenician. Cf. Suidas, "Zenon"; Athenaeus, *Deipnos.*, 13.563 E; Cicero, *loc. cit.* When Diog. Laert. (7.6) speaks of the οἱ ἐν Σιδῶνι Κιτιεῖς, we may assume that the close contacts between Cition and the major Phoenician cities must have persisted for a long time.

This brings up the rather interesting question whether Stoic philosophy, particularly Stoic ethics, was not under the influence of Semitic and perhaps even Hebrew notions of morality. In any event, the high moral standard of Stoic ethical teachings could very well have been of Semitic or Hebrew origin. It should be remembered, however, that Zeno came to Athens at the relatively early age of 22; that his teachers, at least in Athens, were Greeks; and that Crates the Cynic was perhaps the most powerful philosophical influence he experienced. But then again, it should also be recalled that he did not go to Athens on his own free volition, but was apparently forced to remain in Athens for some time because of a shipwreck.

³⁹ It should be kept in mind that the Early Stoics in particular included among "physics" not only theology, but also all those subjects which Aristotle had incorporated in his *Metaphysics*. For according to the Early Stoics, all reality is corporeal and hence physical reality. Thus, since Stoic "physics" also included theology, it actually enjoyed the most exalted rank among the various philosophical disciplines or parts of philosophy. But since the Stoics on the whole displayed little interest and even less originality in their "physics," they borrowed heavily from Heraclitus of Ephesus for their natural philosophy, and from Aristotle for detail. Their ethical teachings, however, constitute their most prominent achievement.

⁴⁰ Cf. Plutarch, *De repug. Stoicis*, 9.6: . . . δεῖ γὰρ τούτοις (scil., τοῖς φυσικοῖς) συνάψαι τὸν περὶ ἀγαθῶν καὶ κακῶν λόγον, οὐκ οὔσης ἄλλης ἀρχῆς αὐτῶν ἀμείνωνος οὐδ' ἀναφορᾶς, οὐδ' ἄλλου τινὸς ἕνεκεν τῆς φυσικῆς θεωρίας παραληπτῆς οὔσης ἢ πρὸς τὴν περὶ ἀγαθῶν ἢ κακῶν διάστασιν.

of seeking pleasure for pleasure's sake;⁴¹ they have no place in a philosophy properly so-called. If, therefore, Herillus, the disciple of Zeno, declared knowledge for knowledge sake as the highest intellectual good and the true purpose of life, then this statement must be considered a distinct deviation from the general Stoic doctrine.⁴²

With the Stoics the meaning as well as the ultimate end of all philosophy is fully determined by the Stoic conception of virtue.⁴³ To them philosophy is the true and safe guide to moral action and the virtuous life. Thus philosophy is also defined as the cultivation and practice of true wisdom. It is "the understanding of things both divine and human."⁴⁴ Seneca expressed the same idea when he proclaimed that philosophy signifies "the study and pursuit (*studium*) of the highest virtue." And this highest virtue is nothing other than wisdom, and as such "the science of things both divine and human."⁴⁵ Hence philosophy, in the final analysis, signifies "the study and pursuit of virtue for virtue's sake,"⁴⁶ the *sapientiae amor et affectatio*⁴⁷—a statement which definitely

⁴¹ Cf. Plutarch, *De repug. Stoicis*, 3.2: ὅσιο δὲ ὑπολαμβάνουσι φιλοσόφοις ἐπιβάλλειν μάλιστα τὸν σχολαστικὸν βίον ἀπ' ἀρχῆς, οὗτοι μοι δοκοῦσι διαμαρτάνειν ὑπονοοῦντες διαγωγῆς τινὸς ἕνεκεν δεῖν τοῦτο ποιεῖν ἢ ἄλλου τινὸς τινὸς τοῦτω παραπλησίον καὶ τὸν ὅλον βίον οὕτω πως διελκύσαι· τοῦτο δ' ἔστιν, ἂν σαφῶς δεωρηθῇ, ἡδέως.

⁴² Cf. Diog. Laert., 7.165: "Herillus . . . declared knowledge to be the ultimate end (τέλος)." *Ibid.*, 7.37; Cicero, *Acad.*, II, 42.129: "Herillum, qui in cognitione et scientia summum bonum ponit . . ." *De fin.*, 2.13.43: "Herillus autem ad scientiam omnia revocans unum quoddam bonum vidit." *Ibid.*, 5.25.73: ". . . Herillus scientiam summum bonum esse defendit." *Ibid.*, 4.14.36.

⁴³ According to Plutarch, *De repug. Stoicis*, 3.2, Chrysippus called hedonists all those philosophers who considered "theoretical life" or theoretical philosophy an end in itself. Nevertheless, the majority of the Stoics admitted that the true πράξις and the βίος λογικὸς had to be based on θεωρία. Hence the difference between the Cynics and the Stoics must be seen in the fact that the latter granted theoretical philosophy at least some importance.

⁴⁴ Sextus Empiricus, *Adv. Math.*, 9.13.

⁴⁵ Seneca, *Epist.*, 89.7.

⁴⁶ Seneca, *Epist.*, 89.8.

⁴⁷ Seneca, *Epist.*, 89.4. This passage might be under the influence of Plato, *Republ.*, 475 B: . . . οὐκοῦν καὶ τὸν φιλόσοφον σοφίας φήσομεν ἐπιθυμητὴν εἶναι. . .

recalls Plato's often reiterated definition of philosophy as the love of wisdom.⁴⁸

Virtue or "right conduct," according to the Stoics, always means rational and intelligent conduct; and only that kind of conduct can be called rational and intelligent which is in conformity with the true nature of man and the innermost essence of things.⁴⁹ Hence real virtue signifies man's complete submission to the cosmic order and the cosmic reason. It is, in other words, the *κατάληψις θείων καὶ ἀνθρωπίνων πραγμάτων*—the comprehension and complete coincidence of things both divine and human.⁵⁰ This definition of virtue, which manifests a universalistic conception of philosophy, induced some Stoics to include theology in philosophy.⁵¹ The submission to the cosmic order as well as the coincidence with the governing cosmic reason, however, of necessity presupposes a definite understanding of this order and the rational forces which work in and through it. For this very reason the Stoics, at least the more prominent among them, could not wholly ignore the problems of cosmology, ontology, and general metaphysics. And these problems in turn forced them to deal with questions of logic and dialectics.

In complete accord with the Socratic teachings, the Stoics insisted that philosophy and the wisdom which it engenders are the first and indispensable prerequisites of true virtue. Thus philosophy properly so-called turns into the *ἀσκησις ἐπιτη-*

⁴⁸ Cf., among others, Plato, *Republ.*, 480A; 485B; 475B; 376B; 502C; 484D; 490A; 521A; 500C; 511B; 543B; 486A; *Sophist*, 268D; *Symposium*, 218A; 203D; 211B; *Phaedrus*, 256A; *Theaetetus*, 176B; *Phaedo*, 68A.

⁴⁹ This notion can already be found among the Early Cynics, and particularly in the writings of Antisthenes, who in this betrays the Sophistic-Socratic background of his philosophy.

⁵⁰ Cf. H. Diels, *Doxogr. Graec.*, 273; 602; H. v. Arnim, *Stoic. Vet. Frag.*, II. no. 35; 36. It should be noted here that this basic definition of philosophical wisdom found a prominent place in the *Corpus Juris* of Justinian. *Digest* (or, *Pandects*), 1.1.10.2; *Institutes*, 1.1.1: "Jurisprudencia est divinarum atque humanarum rerum notitia." *Placita Philos.*, 1. prooem. 2, uses the term *ἐπιστήμη* instead of *πράγμα*. *Πράγμα* expresses more the practical aspect of wisdom, while *ἐπιστήμη* denotes its theoretical meaning.

⁵¹ Cf. Diog. Laert., 7. 1; 7. 41.

δείου τέχνης—the practice of a necessary and befitting art or “way of life.”⁵² Wisdom is fully identified with philosophy, that is, with the *ἀσκησις ἐπιτηδείου τέχνης*; at times it means nothing else than virtue itself:⁵³ . . . ἐπιτήδειον δ’ εἶναι μίαν καὶ ἀνωτάτω τὴν ἀρετὴν [*scil.*, ἔφασαν οἱ Στωϊκοὶ]. . .⁵⁴ This pronounced practico-teleological significance of the whole of Stoic philosophy also determines the theoretical task of philosophy: both theoretical speculation without virtue and virtue without theoretical speculation are impossible.⁵⁵ For it is this theory which furnishes the rational basis for establishing the proper harmony between man and the cosmic *logos*. And it is also this harmony or *katalepsis*, this complete submission to the cosmic order, which constitutes virtue and the *recta ratio*. Thus it should become quite obvious that even though philosophy is primarily the guide to the virtuous life,⁵⁶ it cannot perform this function properly without some theoretical understanding of the nature of the cosmic order.

The importance of a theoretical comprehension and study of the cosmic order and its working was not accepted or emphasized by all Stoics alike. While Chrysippus, for instance, is said to have suggested that philosophy is synonymous with right reason and logic, including theoretical reason,⁵⁷ Aristo of Chius, as we have already pointed out, considered virtuous action the sole concern of man⁵⁸ and, hence, the sole task of all philosophy.⁵⁹ Since theoretical inquiries or logical subtleties

⁵² See note 50, *supra*.

⁵³ Seneca, *Epist.*, 89.8: “Nam nec philosophia sine virtute est nec sine philosophia virtus.”

⁵⁴ *Placita Philos.*, 1. prooem. 2.

⁵⁵ Seneca, *Epist.*, 89.8. Cf. note 53, *supra*.

⁵⁶ Cicero, *Tuscul.*, 5.2.5.

⁵⁷ *Patrol. Graec.*, 78. col. 1637 (Isidore of Pelusium).

⁵⁸ In Lactantius, *Inst. Div.*, 7.7. Cf. Stobaeus, *Florileg.*, 6.111; Plutarch, *De audiendo*, 8 (p. 42); Cicero, *De fin.*, 5.29: “Omnis auctoritas philosophiae consistit in beata vita comparanda.”

⁵⁹ Polemon, the scholarch of the Academy between 315/14 and 270/69, firmly objected to the “ethical radicalism” of the Stoics. He preached that we should practice moderation even in the practice of virtue. Cf. Clement of Alex., *Stromata*, 2.133; Cicero, *De fin.*, 4.6.14 ff.; 2.11.33. Crantor, also a member of the Academy,

do not contribute anything to virtue,⁶⁰ Aristo urged, they can readily be dispensed with.⁶¹ Aristo's extreme "anti-intellectualism," however, must be considered the exception among the Early Stoics rather than the rule. This might be gathered from the significant fact that Zeno had already subdivided philosophy into logic (dialectics), ethics, and physics.⁶² And by doing so he had given, at least by implication, equal prominence to ethico-practical and theoretico-speculative issues. Cleanthes likewise wrote extensively on logic and physics,⁶³ as did Spheeris of Bosphorus after him.⁶⁴ In any event, with the leading Early Stoics, logic, ethics, and physics constituted but special branches of universal philosophy, although it must be admitted that both logic and physics to some degree seem always to remain subordinate to the pre-eminent position held by the ethico-practical issue. Particularly after the earlier Stoic system of philosophy had been fully developed by Chrysippus,

in his famous work *περὶ πένθους*, likewise and for the same reason objected to the Stoic doctrine of the "apathy" as regards all affections. He demanded that we should practice moderation and restraint rather than eradicate all affections (*μετρωπάθεια*). For complete "apathy" would abolish all feelings of benevolence or friendship. Cf. Cicero, *Acad.*, II. 44.135; *Tuscul.*, 3.6.12; Plutarch (?), *Consolatio ad Apollonium*, 3. Remnants of this *μετρωπάθεια* are still to be found in Seneca, *Ad Polybium de consolatione*, 17.2; 18.5 ff.; *Ad Helviam matrem de consolatione*, 16.1.

⁶⁰ Cf. Stobaeus, *Florileg.*, 82.7; 82.15; 82.16; Diog. Laert., 7.161; 7.163. Cf. notes 36 and 37, *supra*.

⁶¹ Cf. Diog. Laert., 7.162; Sextus Empiricus, *Adv. Math.*, 7.13; Seneca, *Epist.*, 94.1-12. — It is quite obvious, however, that the point of view of Aristo does not represent the typical Stoic position. His attitude must be understood rather as a polemic outburst directed not only against the Academy and the Peripatetics, but also against certain Stoics who, like Chrysippus, gave prominence to physical and logical (semantic) investigations.

⁶² Cf. Diog. Laert., 7.39: *τριμερὴ φασὶν (scil., οἱ Στωϊκοί) εἶναι τὸν κατὰ φιλοσοφίαν λόγον. εἶναι γὰρ αὐτοῦ τὸ μὲν τι φυσικόν, τὸ δὲ ἠθικόν, τὸ δὲ λογικόν. οὕτω δὲ πρῶτος διείλετο Ζήνων . . . ἐν τῷ Περὶ λόγου καὶ Χρυσίππος. . .*

Cf. Plutarch, *De repug. Stoic.*, 8.1; 8.2. Plutarch tells us that Zeno not only devised logical sophisms and paralogisms, but actually tried to solve them. See also Sextus Empiricus, *Adv. Math.*, 7.16 ff.; Seneca, *Epist.*, 89.9; 89.14 ff.

⁶³ Diog. Laert., 7.174 ff.

⁶⁴ Diog. Laert., 7.178 ff. — According to Diog. Laert., 7.40, Zeno, Chrysippus, Archidamas, and Eudemos (or, Eudromos) mention logic in the first, physics in the second, and ethics in the third place.

the importance and usefulness of logical and physical investigations for philosophy became generally recognized. For, according to Chrysippus, all ethical inquiry had to be based on a thorough understanding of the natural, that is, rational cosmic order of things which is a physical cosmos. Only by mastering the conceptual structure of the rational order might we fully comprehend its true and abiding nature and thus be capable of making universally valid statements concerning the nature of good and evil.⁶⁵

In full accord with the general Stoic emphasis on ethico-practical issues and on virtue, and also because of their subdivision of all philosophy into logic, ethics, and physics, the Stoics, true to their definition of philosophy as the *ἄσκησις ἐπιτηδείου τέχνης*, actually spoke of a logical, ethical, and physical virtue or *ἀρετή*.⁶⁶ These three "virtues," however, are always inseparably linked together⁶⁷ and have, therefore, in the final analysis, actually one single and all-encompassing ethico-teleological meaning. Cleanthes, again, mentioned six subdivisions⁶⁸ of philosophy⁶⁹ and, hence, six basic philosophical virtues: dialectics (logic), rhetoric, ethics, politics, physics, and theology.⁷⁰ Obvi-

⁶⁵ Plutarch, *De repug. Stoic.*, 9.4: οὐ γὰρ ἐστὶν εὐρεῖν τῆς δικαιοσύνης ἄλλην ἀρχὴν οὐδ' ἄλλην γένεσιν ἢ τὴν ἐκ τοῦ Διὸς καὶ τὴν ἐκ τῆς κοινῆς φύσεως. ἐντεῦθεν γὰρ δεῖ πᾶν τὸ τοιοῦτον τὴν ἀρχὴν ἔχειν, εἰ μέλλομέν] [τι εἶρεῖν περὶ ἀγαθῶν καὶ κακῶν Cf. *ibid.*, 9.5: οὐ γὰρ ἐστὶν ἄλλως οὐδ' οἰκειότερον ἐπελθεῖν ἐπὶ τὸν τῶν ἀγαθῶν καὶ κακῶν λόγον οὐδ' ἐπὶ τὰς ἀρετὰς οὐδ' ἐπὶ εὐδαιμονίαν, ἀλλ' ἡ ἀπὸ τῆς κοινῆς φύσεως καὶ ἀπὸ τῆς τοῦ κόσμου διοικήσεως. Diog. Laert., 7.42; 7.46 ff.

⁶⁶ *Placita Philos.*, 1 prooem. 2, quoted in note 32, *supra*. Cf. Cicero, *De fin.*, 3.21.72; 3.21.73. Diog. Laert., 7.46: αὐτὴν δὲ τὴν διαλεκτικὴν ἀναγκαίαν εἶναι καὶ ἀρετὴν ἐν εἴδει περιέχουσιν ἀρετὰς. . . .

⁶⁷ Sextus Empiricus, *Adv. Math.*, 7.16.

⁶⁸ The Stoic terms for these subdivisions are: *μέρη, τόπος, εἶθη*, or *γένος*.

⁶⁹ H. v. Arnim, *Stoic. Vet. Frag.*, I. no. 482; Diog. Laert., 7.41.

⁷⁰ It should be noted, however, that the six subdivisions proposed by Cleanthes can easily be reduced to the original three subdivisions: (a) dialectics (or logic) and rhetoric; (b) ethics and politics; and (c) physics and theology.—Since with the Stoics physics or natural philosophy deal with the cosmic, that is, the rational and hence divine order of things which is at the same time the divine logos, it should be obvious that Stoic physics or, as we would say today, the "metaphysics of nature," must be co-extensive with theology or the science of the things divine. Already Aristotle had referred to his metaphysics as theology. Cf., for instance, *Metaphysics*, 1026 a 18.

ously, logic or dialectics in its relationship to physics and ethics is always governed by the latter;⁷¹ for ethics and the ethical problem always remain the dominant issue in Stoic philosophy; and ethics, being the "ruler," certainly is not dependent on those it rules. Thus ethics would depend on logic or dialectics only in the sense that a superior relies on servants or instruments which he employs for his purposes.⁷² The relationship of physics to ethics, however, is not always so clear. For, on the one hand, ethics signifies to the Stoics the ultimate end and, therefore, the dominant issue of all philosophy; philosophy is, after all, virtue and the practice of the moral way of life.⁷³ This virtue, this moral way of life, on the other hand, consists in man's submission to, and harmony with, the rational cosmic order and the universal nature of things. To determine this cosmic order as well as the nature of things remains the foremost task of Stoic physics. Thus with the Stoics, physics seems to have as its proper object a higher issue: the conceptual definition of a universal standard which is used by ethics and ethical evaluation to determine the moral good in terms of complete coincidence of action and nature.⁷⁴

Philosophical *wisdom*, according to the Stoics, is "the understanding of things both divine and human as well as their causes,"⁷⁵ or, as Cicero puts it, "the understanding of the first principles and the causes of everything."⁷⁶ It is, in other words,

⁷¹ Cf. Diog. Laert., 7. 39; Sextus Empiricus, *Adv. Math.*, 7. 17 ff.

⁷² Cf. Philo of Alex., *De agricultura*, 189 (edit. Mangey); *De mutatione nominum*, 589 (edit. Mangey).

⁷³ Cf. H. Diels, *Doxogr. Graec.*, 273; 602; H. v. Arnim, *Stoic. Vet. Frag.*, II. no. 35; 36. — The Cynics, particularly Antisthenes, had already pointed out that virtue is the sole prerequisite for the happy life; and that virtue, being nothing other than the practice of the virtuous life, does not stand in need of any theoretical or scientific foundation. Cf. Diog. Laert., 6. 11; 6. 13.

⁷⁴ Cf. Plutarch, *De repug. Stoic.*, 9. 4, quoted in note 65, *supra*.

⁷⁵ Seneca, *Epist.*, 89. 8: ". . . sapientiam quidam ita finierunt ut dicerent divinarum et humanarum rerum scientiam. Quidam ita: sapientia est nosse divina et humana et eorum causas." — This passage might have been inspired by Plato, *Republ.*, 475B: "May we not say of the philosopher that he is a lover, not of a part of wisdom, but of the whole?"

⁷⁶ Cicero, *Tuscul.*, 5. 3. 7; *De fin.*, 2. 2. — This definition could very well have

the κατάληψις or ἐπιστήμη θείων καὶ ἀνθρωπίνων πραγμάτων.⁷⁷ *Philosophy*, as distinguished from philosophical wisdom, "is to some the study of virtue, while to others it signifies the effort of improving one's mind; and to others, again, it is the quest for right reason."⁷⁸ It should be noted here that the definition which sees in philosophy the "*adpetitio rectae rationis*,"⁷⁹ on the one hand, and the study of virtue, on the other hand, definitely contrasts a more particular and restricted theoretical meaning of philosophy with its general ethico-practical or ethico-teleological significance.⁸⁰

* * *

In the general vernacular of the Later Stoics the term "philosophy" denotes, above all, that type of practical knowledge or understanding which might be inferred from its practical efficacy. In this sense philosophy was considered "a most urgent art," and virtue as being "of the most urgent necessity."⁸¹ The perfect and indissoluble union of true philosophy and moral wisdom, of real understanding and genuine virtue, found its most telling expression in Seneca when the latter proclaimed that "philosophy is the pursuit of virtue, but solely through virtue itself. Because it is impossible to practice

been under the influence of Aristotle. Cf., for instance, *Metaphysics*, 982 b 9: "This must be a science that investigates the first principles and causes."

⁷⁷ Sextus Empiricus, *Adv. Math.*, 9.13. Cf. *Placita Philos.*, 1. prooem. 2; Pseudo-Galen, *Hist. philos.*, 5.

⁷⁸ Seneca, *Epist.*, 89.5: "alii studium illam [scil., sapientiam] virtutis esse dixerunt, alii corrigendae mentis, a quibusdam dicta est adpetitio rectae rationis." This "adpetitio rectae rationis," is really nothing else than the ἐπιτήδευσις λόγου ὁρθότητος, ascribed to Chrysippus. Cf. H. v. Arnim, *Stoic. Vet. Frag.*, II. 15, 12; II. 41, 28; II. 18, 28; III. no. 293; *Patrol. Graec.*, 78. col. 1637 (Isidore of Pelusium); Sextus Empiricus, *Adv. Math.*, 9.13.

⁷⁹ Seneca, *Epist.*, 89.5, quoted in note 78, *supra*. Compare, in this connection, Plato, *Republ.*, 475C: "Who then are the true philosophers? Those, I said, who are the lovers of the vision of truth."

⁸⁰ Cf. *Papyr. Hercul.*, 1020: ἐπιτήδευσις λόγου ὁρθότητος. Cf. H. v. Arnim, *Stoic. Vet. Frag.*, II. 15, 12: φιλοσοφία εἴτε ἐπιτήδευσις λόγου ὁρθότητος εἴτ' ἐπιστήμη . . . *Ibid.*, II. 41, 28; III. no. 293. This dual definition of philosophy has also been used by the author of the epistle erroneously ascribed to Musonius. Cf. O. Hense, *Musonii Rufi reliquiae*, 141. 2 ff.

⁸¹ *Placita Philos.*, 1. prooem. 2.

virtue without pursuing and studying virtue; or to study and pursue virtue without possessing virtue.”⁸² And “not in mere words, but in the things themselves resides philosophy. This type of philosophy educates as well as edifies the soul; it brings harmony into man’s life; it regulates human actions; and it adds to the understanding of that which one ought to do and that which one ought to avoid. It forms the governing factor, and decides on the path which leads you safely through the uncertainties of life.”⁸³ In this sense true philosophy is always the “*ars vitae*,”⁸⁴ and as such is “the mother of all the arts as well as the true invention of the gods.”⁸⁵ It is, in other words, the “*omnis rerum optimarum cognitio et in iis exercitatio*.”⁸⁶ For, in the final analysis, philosophy means virtue, which is nothing other than the intelligent display of right reason; and right reason is reason motivated by truly moral considerations.⁸⁷ In short, philosophy signifies the rational and virtuous conduct of life:⁸⁸ “*O vitae philosophia dux! O virtutis indagatrix expultrixque vitiorum!*”⁸⁹

Like Aristo of Chius before him, Seneca,⁹⁰ the practical

⁸² Seneca, *Epist.*, 89. 8.

⁸³ Seneca, *Epist.*, 16.

⁸⁴ Cicero, *De fin.*, 2. 2. Cf. notes 141, 176, and 304, *infra*, and the discussion of the definition of philosophy as the τέχνη τεχνῶν, in notes 304 ff., *infra*.

⁸⁵ Cicero, *Tuscul.*, 1. 26. 64.

⁸⁶ Cicero, *Tuscul.*, 5. 3. 7.

⁸⁷ Cf. H. v. Arnim, *Stoic. Vet. Frag.*, I. 15, 12; I. 41, 28; I. 18, 25; III. no. 293; Cicero, *Acad.*, I. 10. 38: “his [*scil.*, Zeno] omnes [*scil.*, virtutes] in ratione ponebat.” *Tuscul.*, 4. 15. 34: “Ipsa virtus brevissime recta ratio dici potest.” Seneca, *Epist.*, 113. 2: “Virtus autem nihil aliud est quam animus quodammodo se habens.”

⁸⁸ H. Diels, *Doxogr. Graec.*, 273; 602; H. v. Arnim, *Stoic. Vet. Frag.*, II. no. 35; 36.

⁸⁹ Cicero, *Tuscul.*, 5. 2. 5. Cf. *ibid.*, 1. 26. 64; 2. 4. 11 ff.; *De officiis*, 2. 2. 5 ff.; *De legibus*, 1. 22. 58 ff.

⁹⁰ There can be no doubt that Seneca fully intended to adhere to the general Stoic tradition. Cf., for instance, *Epist.*, 113. 1; *De constantia sapientis*, 1; *Ad Polybium de consolatione*, 12. 4; *Epist.*, 83. 9.—Nevertheless, he occasionally claims it his right to deviate from the traditional Stoic teachings. Cf. *Ad Gallionem de vita beata*, 3. 2; *Ad Serenum de otio*, 3. 1; *Epist.*, 33. 11; 45. 4; 80. 1; 64. 7 ff.; *De ira*, 1. 6. 5.

Roman, had little faith in—and even less use for—purely theoretical or dialectical discussions and niceties.⁹¹ Rather, he believed in the ethico-practical efficacy of philosophy and philosophical inquiry. Thus he simply disregarded or considered outright superfluous many problems of philosophy with which some of his predecessors had seriously been concerned. Although he repeated occasionally the usual Stoic definitions concerning the nature, function, or parts of philosophy,⁹² in the main he concentrated on its moral or practical significance: ⁹³ “*Facere docet philosophia, non dicere.*” ⁹⁴ It is not for man to quibble over concepts, meanings, or principles.⁹⁵ Philosophy is, above all, the eloquent “*humani generis paedagogus*,”⁹⁶ the “*ars rectae vitae agenda*.”⁹⁷ It constitutes the basic *regula vitae*⁹⁸ which can very well dispense with semantic controversies. For philosophy is not intended to be a mere display of dialectical acumen, but must be conceived as the

⁹¹ While Seneca had little use for logical inquiries, he displayed some interest in physics—physics in the Stoic sense of the term. In this he definitely showed the influence of Posidonius of Rhodes, who furnished Seneca with many ideas for this *Naturalium quaestionum libri VII*. But this occupation with physics was recommended by Seneca primarily for practical reasons: ignorance of the true causes of natural phenomena is the source of many of our needless fears. Cf. *Nat. quaest.*, 6.3.2. The correct understanding of nature, on the other hand, is the source of comfort and courage. Cf. *Nat. quaest.*, 6.1.3; *De beneficiis*, 5.6.4. At the same time a fuller understanding of the greatness and magnificence of this world and of the deity will make us realize our own insignificance. Cf. *Nat. quaest.*, 1. prooem. 13 ff.

⁹² Cf. *Epist.*, 94.47 ff.; 95.10.

⁹³ Cf. for instance, *Epist.*, 88.13: “Scis quae recta sit linea: quid tibi prodest, si quid in vita rectum sit, ignoras?” *Epist.*, 88.28: “Una re consummatur animus, scientia bonorum ac malorum immutabili, quae soli philosophiae competit: nihil autem ulla ars alia de bonis ac malis querit.” *Epist.*, 88.33-35.

⁹⁴ *Epist.*, 20.2; 24.25.—Antisthenes had already shown that true virtue is based solely on practice rather than theory. Cf. Xenophon, *Memorab.*, 1.2.19. And Cicero, in *De officiis*, 1.44.158, insisted that “omne officio, quod ad coniunctionem hominum tuendam valet, anteponendum est illi officio, quod cognitione et scientia continetur.”

⁹⁵ *Epist.*, 88.43: “Audi, quantum mali faciat nimia subtilitas et quam infesta veritati sit.” Cf. *Epist.*, 109.11.

⁹⁶ *Epist.*, 89.13.

⁹⁷ In Lactantius, *Inst. Div.*, 3.15.

⁹⁸ In Lactantius, *Inst. Div.*, 3.15. Cf. Seneca, *Epist.*, 117.12; 94.39.

foremost remedy of the morally sick soul.⁹⁹ At the same time it is the most outstanding teacher,¹⁰⁰ but whatever it teaches will be of little real value to us unless it is applied to our own moral improvement.¹⁰¹ What true advantage, Seneca queried, might be gained from polymathy or the historical sciences? "*Cuius ista errores minuent, cuius cupiditates prement? Quem fortiozem, quem iustiozem, quem liberaliozem facient?*"¹⁰² True philosophy or philosophical wisdom is a rather simple thing which does not require a great or vast knowledge of facts.¹⁰³ For wisdom (*sapientia*), and not mere learnedness (*sapere*), constitutes real philosophical good.¹⁰⁴ All men, Seneca concluded, to a greater or lesser degree, are morally sick and, hence, stand in urgent need of a moral cure. And philosophy is the sole remedy which can achieve such a cure.¹⁰⁵

Similar views were also expressed by the so-called Sextians,¹⁰⁶ who insisted that all efforts to acquire great learning are idle and vain attempts unless they are meant to improve man morally.¹⁰⁷ The truly wise man, according to Q. Sextius, goes

⁹⁹ *Epist.*, 117.33: "Adice nunc, quod adsuescit animus delectare se potius quam sanare et philosophiam oblectamentum facere, cum remedium sit."

¹⁰⁰ *Epist.*, 20.2; 24.15; 89.13.

¹⁰¹ *Epist.*, 89.18: "Quicquid legeris ad mores statim referas." *Ibid.*, 89.23: "Haec aliis dic . . . omnia ad mores et ad sedandam rabiem adfectum referens." Cf. *Epist.*, 117.23; 117.33.

¹⁰² *Ad Paulinam de brevitate vitae*, 13.

¹⁰³ *Epist.*, 106.11: "In supervacaneis subtilitas teritur: non faciunt bonos ista, sed doctos. Apertior res est sapere, immo simplicior. Paucis est ad mentem bonam uti literis: sed nos ut cetera in supervacaneum diffundimus, ita philosophiam ipsam. Quemadmodum omnium rerum, sic literarum quoque intemperantia laboramus: non vitae sed scholae discimus." Cf. *Epist.*, 47.4 ff.; 87.38 ff.; 88.36: "Plus scire velle quam sit satis et, intemperantiae genus est."

¹⁰⁴ *Epist.*, 117.18: "Omnia ista circum sapientiam, non in ipsa sunt: a nobis in ipsa commorandum est . . . haec vero, de quibus paulo ante dicebam, minuunt et deprimunt, nec, ut putatis exacuunt, sed extenuant." Cf. *Epist.*, 82.22. — According to the Early Cynics, the wise and virtuous man has but contempt for reading and writing, inasmuch as they detract him from living the good and virtuous life. Cf. *Diog. Laert.*, 6.103.

¹⁰⁵ *Epist.*, 50.4; 28.9. — As to the origin of the notion that philosophy is a remedy for the morally sick soul, cf. note 113, *infra*.

¹⁰⁶ Cf. Seneca, *Epist.*, 64.5.

¹⁰⁷ Seneca, *Ad Paulinam de brevitate vitae*, 13.9. — This statement has actually

safely through the perils of life and its vicissitudes, armed with his philosophy and with his virtues.¹⁰⁸ And philosophy or virtue is not perchance a remote ideal, but rather something that can actually be attained and fully lived.¹⁰⁹ Musonius,¹¹⁰ the younger contemporary of Seneca, emphasized even more than Seneca himself the ethico-teleological significance of philosophy,¹¹¹ although he also dealt to some degree with certain theoretical or speculative aspects of philosophy.¹¹² Thus it may be surmised that he merely rejected that sort of theoretical speculation which is being carried on for its own sake and without any reference to the practical demands of moral life. According to Musonius, all men are morally sick. To regain their moral health they sorely stand in need of continuous and competent medical treatment.¹¹³ And philosophy is the only physician, the sole remedy capable of curing the ailing soul.¹¹⁴ For philosophy is the only possible and secure path to virtue, and virtue the sole healthy state of the soul.¹¹⁵ Hence,

been ascribed to Fabianus Papius. About Fabianus, see Seneca, *op. cit.*, 10.1; *Epist.*, 11.4; 40.12; 100.12; 58.6; 100.9; 100.1 ff.; *Ad Marciam de consolatione*, 23.5; *Nat. quaest.*, 3.27.3.

¹⁰⁸ Seneca, *Epist.*, 59.7.

¹⁰⁹ Seneca, *Epist.*, 64.5. — In this the Sextians definitely proved the fact that they were practical Romans rather than theorizing Greeks.

¹¹⁰ O. Hense, *Musonii Rufi reliquiae* (Leipzig, 1905); P. Wendland, *Quaestiones Musonianae* (Berlin, 1886); T. Pflieger, *Musonius bei Stobaeus* (Tauberbischofsheim, 1897).

¹¹¹ See "topics" no. 2; 6; 9; 17, in Hense, *op. cit.*

¹¹² Cf. Stobaeus, *Florileg.*, 117.8; 108.60; Epictetus, *Discours.*, 7.3.

¹¹³ Plutarch, *De cohib. ira*, 2; Gellius, *Attic. noct.*, 5.1.2. The notion that man is actually a morally sick person goes back to the Cynics (Antisthenes). Cf. Diog. Laert., 6.4; 6.6; 6.30; 6.36; Lucian, *Vit. auct.*, 8; Dio Chrysostom, *Orat.*, 8.7 ff.; Stobaeus, *Florileg.*, 13.25; 3.62; Plutarch, *An viciousitas ad infelicitatem sufficiat*, 3. By impressing their listeners with the need of living according to nature, the Cynics were really the first philosophers who held that philosophy was a "cure for the morally sick soul." It should be noted here that an *ιατρικὸς λόγος* had already been ascribed, although erroneously, to Empedocles. Even Plato (*Republ.*, 489 B; *Theaet.*, 167 B) compared the philosopher to the physician, as did Philo of Larissa (Stobaeus, *Eclog.*, 2.40 ff.) and Seneca (*Epist.*, 28.9; 50.4). Cf. note 105, *supra*.

¹¹⁴ See note 113, *supra*. Cf. notes 124; 125; 153; 156; 174; 233; 290, *infra*.

¹¹⁵ Stobaeus, *Florileg.*, 2.48.67.

all people should occupy themselves with philosophy.¹¹⁶ The only real content as well as purpose of philosophy is virtue; for philosophy, properly understood, signifies nothing other than the full appreciation and practice of those principles which underlie right conduct.¹¹⁷ Real virtue, however, is the reward of a philosophical life rather than the result of philosophical instruction and discussion.¹¹⁸ The true philosopher and the truly virtuous man are actually one and the same person,¹¹⁹ for philosophy and virtue are only two different designations for one and the same thing. It remains the prime task of the real philosopher to stimulate the moral improvement of his fellow men by ministering to them and their moral needs.¹²⁰

Epictetus,¹²¹ the disciple of Musonius, likewise saw the main function and purpose of philosophy in its practical effects on man's moral evolution and edification. To philosophize means, above all, to learn and to understand that which we should pursue and that which we should avoid.¹²² All philosophy begins with the realization of our own weakness and deficien-

¹¹⁶ Stobaeus, *Florileg.*, 2. 13. 126; Musonius, "topic" no. 3; no. 4 (in Hense). Cf. note 120, *infra*.

¹¹⁷ Stobaeus, *Florileg.*, 2. 48. 67; 2. 67. 20: οὐ γὰρ δὴ φιλοσοφεῖν ἕτερόν τι φαίνεται ὃν ἢ τὸ ἀπρέπει καὶ ἀπροσέχει λόγῳ μὲν ἀναζητεῖν ἔργῳ δὲ πράττειν. . . . Cf. *ibid.*, 2. 13. 123: φιλοσοφία καλοκαγαθίας ἐστὶν ἐπιτήδευσις καὶ οὐδὲν ἕτερον. *Ibid.*, 2. 13. 126: ζητεῖν καὶ σκοπεῖν ὅπως βιώσονται καλῶς, ὅπερ τὸ φιλοσοφεῖν ἐστὶ.

¹¹⁸ Stobaeus, *Florileg.*, 29. 78; Lucius, in: Stobaeus, *op. cit.*, 1. 7. 46.

¹¹⁹ Stobaeus, *Florileg.*, 79. 51: τὸ δὲ γε εἶναι ἀγαθὸν τῷ φιλοσοφῶν εἶναι παντὸν ἐστὶ. Hence the philosopher is preeminently qualified to be a king, and the good king is necessarily a philosopher. *Ibid.*, 48. 67. The affinity of this passage with Plato, *Republ.*, 473 C; 494 B; and 501 E, is rather obvious. Cf. O. Hense, *op. cit.*, "topic" no. 8, quoted in note 120, *infra*.

¹²⁰ Cf. Gellius, *Attic. noct.*, 5. 1; Epictetus, *Discours.*, 3. 23. 29. See also Musonius and his many suggestions concerning the nature and purpose of philosophy and philosophical training, in "topic" no. 1 (in O. Hense, *op. cit.*): ὅτι οὐ δεῖ πολλὰς ἀποδείξεισι πρὸς ἐν πρᾶγμα χρῆσασθαι. No. 3: ὅτι καὶ γυναῖξί φιλοσοφῆτεον. No. 4: εἰ παραπλησίως παιδευτέον τὰς θυγατέρας τοῖς υἱοῖς. No. 5: πρότερον ἰσχυρότερον ἔθος ἢ λόγος. No. 8: ὅτι φιλοσοφῆτέον καὶ τοῖς βασιλεῦσιν. No. 11: τίς ὁ φιλοσόφῳ προσέκων πόρος, to which Musonius replied, ὁ πόρος ἐκ γεωργίας φαίνεται ὡν τῷ φιλοσόφῳ πρεπωδέστατος. No. 14: εἰ ἐμπόδιον τῷ φιλοσοφεῖν γάμος.

¹²¹ Cf. A. Bonhöffer, *Epiktet und die Stoa* (Stuttgart, 1890); P. Wendland, *Hellenistik-Römische Kultur*, 3d edit.; R. Asmus, *Quaestiones Epicteteae* (Freiburg, 1888); C. Martha, *Les moralistes sous l'empire Romain* (Paris, 1896).

¹²² *Discours.*, 3. 14. 10; 1. 1. 3; 1. 1. 4.

cies: he who desires to become good and virtuous must first of all be aware of his own moral shortcomings.¹²³ The true philosopher is really nothing else than a physician¹²⁴ who ministers to those who are sick in their souls.¹²⁵ Hence, his main task consists in helping and healing rather than debating and proselytizing. He will appeal to man's moral conscience by showing him the wretchedness of his ignorance and the evils which follow in the wake of sin. And he will essay to turn him into a true philosopher and virtuous man rather than an erudite scholar or scholiast.¹²⁶ He who aspires to nothing except to live as a free man and who fears nothing is the real philosopher.¹²⁷ For this is the essence of all philosophical wisdom—to be able to discern what is within our power to attain and what is not.¹²⁸

To Epictetus philosophy signifies a sermon of the deity delivered through the mouth of the wise man.¹²⁹ This being so, the true philosopher will not challenge the unphilosophical and evil world with an attitude of conceit and unwarranted self-confidence, but will face it in a spirit of humility and quiet resignation. Neither will he play the part of the outraged moralist who rants about the iniquities and foolishness of this world; like a good and conscientious physician who pities rather than denounces his patients, the philosopher faces this sorry world of ours in a spirit of charity and humility.¹³⁰ Inasmuch as Epictetus considered virtue and the practical application of moral wisdom as the only relevant function of philoso-

¹²³ *Discours.*, 2. 11. 1; Stobaeus, *Florileg.*, 1. 48.

¹²⁴ Cf. notes 113 and 114, *supra*.

¹²⁵ *Discours.*, 3. 23. 30; 3. 21. 8; 1. 9. 10 ff. Cf. Stobaeus, *Florileg.*, 4. 94.—This definition reappears in Demonax. Cf. Lucian, *Demonax*, 6.

¹²⁶ Cf. *Discours.*, pref. of Arrian 5 ff., where the latter states that Epictetus' philosophical ideas, "even when he uttered them, . . . aimed at nothing more than to excite his listeners to virtue. . . . His audience could not help being affected in the very manner he intended they should. . . ."

¹²⁷ *Discours.*, 2. 17. 29; 1. 4. 18.

¹²⁸ *Discours.*, 1. 1. 21; 1. 22. 9 ff.; *Enchiridion*, 1; 3.

¹²⁹ *Discours.*, 1. 3. 36 ff.

¹³⁰ Cf. *Discours.*, 1. 18. 1 ff.; 1. 28. 1 ff.; 3. 3. 2; 2. 26; 3. 7. 15; 3. 23. 21; 3. 21. 8; 2. 19.

phy,¹³¹ he did not think too much of the theoretical or speculative sciences¹³² which to him were only ancillary topics subservient to the greater moral issues of life.

Perhaps the most enlightening summary of the Late Stoic interpretation of the meaning of philosophy can be found in Marcus Aurelius:

What then is that which is able to guide man? One thing, and one only—philosophy. But this consists in keeping the soul (demon) of man free from violence and harm, superior to passions and pleasures, doing nothing without a purpose, nor yet falsely and with hypocrisy, not feeling the need of another man's doing or not doing anything; and besides accepting all that happens, and all that is allotted, as coming from hence, wherever it is, whence he himself came; and finally, waiting for death with a cheerful mind.¹³³

The prime function of philosophy, therefore, consists in shaping our character and soothing our disturbed soul; and to accomplish this, "philosophy insists only on the things on which thy own nature insists."¹³⁴ Since philosophy is the sole occupation which endows us with a solid and stable foundation in this everlasting flux of changing sensations and phenomena, "let . . . philosophy be to thee step-mother and mother; turn to philosophy frequently and repose in her."¹³⁵ "For never to desert philosophy in any events which might befall us, nor to hold trifling talk either with an ignorant man or one unacquainted with nature, is a principle held by all schools of philosophy; but to be intent only on what is now being done and on the instruments by which it is done."¹³⁶

Panaetius of Rhodes (c. 185—110/109)¹³⁷ tried to avoid

¹³¹ Cf. *Discours.*, 1. 4. 5; 2. 17. 27 ff.; 3. 21. 1 ff.; 1. 7. 1 ff.; 2. 29; 1. 8. 4 ff.

¹³² Antisthenes had already pointed out that virtue does not stand in need of λόγοι and μαθήματα. Cf. Diog. Laert., 6. 11; 6. 31.

¹³³ *Thoughts*, 2. 17.

¹³⁴ *Thoughts*, 5. 9.

¹³⁵ *Thoughts*, 6. 12.

¹³⁶ *Thoughts*, 9. 41.

¹³⁷ Cf., in general, A. Schmekel, *Die Philosophie der mittleren Stoa in ihrem geschichtlichen Zusammenhang* (Berlin, 1892); H. Fowler, *Panaetii et Hecatonis Librorum Fragmenta* (Bonn, 1885).

some of the one-sided features of Stoic teachings¹³⁸ by refusing to define philosophy exclusively in terms of moral life actually lived. As a matter of fact, he insisted quite strongly that every province of philosophical inquiry constitutes an essential and integral part of philosophy. To him philosophy signifies the proper means enabling man to attain the perfection of reason as well as that of morals. Philosophy is that one compelling force which brings about the fullest unfolding of man's total individual essence. By emphasizing the power of philosophy over the minds and hearts of men, and by believing in its practical efficacy to bring about the intellectual as well as moral evolution of mankind, Panaetius definitely broke away from the rather negative Stoic idea of the *ἀπάθεια*, which, by preaching resignation rather than action, did not hold out much hope for mankind. His insistence that in its practical and efficient aspects philosophy should help individual man to unfold intelligently his natural gifts and talents to the utmost, turned philosophy into a great humanizing force and made it an important factor in bringing about the true *humanitas*.

Posidonius of Apamea (c. 135-c. 50),¹³⁹ according to the testimony of Seneca,¹⁴⁰ is said to have declared philosophy the mother of all the arts and sciences.¹⁴¹ Thus he established not only the preëminence of philosophy over all the other sciences, but also defined its relationship to every branch or province of human learning. The central position of man in the hierarchic structure of the universe—man partakes both of the physical and spiritual world—according to Posidonius, makes man himself, as well as the science of man, the foremost and most pressing problem of all philosophy. In this fashion the old Socratic

¹³⁸ Cicero, *De fin.*, 4. 28. 79.

¹³⁹ Cf. A. Schmekel, *op. cit.*; K. Reinhard, *Posidonius* (München, 1921); W. Jaeger, *Nemesios von Emesa* (Berlin, 1914); E. Norden, *Agnostos Theos*.

¹⁴⁰ *Epist.*, 88. 24; 88. 21; 90. 7; 90. 23.

¹⁴¹ Cicero, who was a disciple of Posidonius, took over this definition. See note 85, *supra*.

exhortation of *γνῶθι σεαυτὸν* becomes a *γνῶναι ἑαυτόν*, and as such the real core of all true philosophy.¹⁴²

* * *

All these definitions of philosophy devised by the Stoics or coined under the influence of Stoic tradition lack that precise line of demarcation by which Aristotle had tried to set apart his "first philosophy" from all the other "special philosophies."¹⁴³ With the Stoics in general, philosophy is thought of in terms of the sum total of all intelligent efforts in their relationship to the "good life" and the wise or virtuous man. It is needless to say that this interpretation much resembles the earliest definitions of philosophy in the Hellenic world.¹⁴⁴ The oldest and certainly the most comprehensive meaning of the term philosophy¹⁴⁵ was the intelligent quest for balanced erudition and culture (*παιδεία*) or, as Cicero put it, the "*omnium rerum optimarum cognitio et in iis exercitatio*."¹⁴⁶ According to this "classical" definition the philosopher is one who *μετείληφε παιδείας διαφόρου καὶ περιττῆς*. This is also the meaning of the term philosophy used by Pericles when he said about the Athenians that *φιλοκαλοῦμεν μετ' εὐτελείας καὶ φιλοσοφοῦμεν ἄνευ μαλακίας*.¹⁴⁷ This comprehensive definition reappeared suddenly during the second century after Christ, when Aelius Aristides,¹⁴⁸ a late Stoic, called philosophy "a certain love for the beautiful and the discussion of what is intelligent. This love, however, is not a mere momentary fancy, but rather a universally valid education."¹⁴⁹

¹⁴² This idea of making man and the knowledge of man the center of all philosophical inquiry, is also found in Porphyry (in Stobaeus, *Florileg.*, 21.27), Proclus (in *Comment. in Plat. Alcib. I.* p. 296), and Julian the Apostate (*Orat.* 6, p. 238, edit. Hertlein). Cf. W. Jaeger, *op. cit.*, 40 ff.

¹⁴³ Cf. A.-H. Chroust, *loc. cit.*, 36 ff.

¹⁴⁴ Cf. A.-H. Chroust, *loc. cit.*, 20 ff.

¹⁴⁵ Cf. A.-H. Chroust, *loc. cit.*, 20 ff.

¹⁴⁶ *Tuscul.*, 5.3.7.

¹⁴⁷ Thucydides, 2.40: "For we engage in good taste judiciously and treat philosophy without effeminacy."

¹⁴⁸ O. Weinreich, in: *Neue Jahrb.*, 35 (1915), 224 ff.

¹⁴⁹ *Orat.*, 46 (p. 407, edit. Dindorf): *φιλοκαλία τις καὶ διατριβὴ περὶ λόγους καὶ οὐχ ὁ νῦν τρόπος οὗτος, ἀλλὰ παιδεία κοινῶς*.

It should be noted that the Late Stoics, who insisted upon the complete autarchy of virtue, had much in common with the Cynics,¹⁵⁰ who experienced a strong revival during the first two centuries of the Christian era.¹⁵¹ Under the impact of certain Cynic teachings, philosophy—particularly the Stoic notion of philosophy—underwent a noticeable change. It was no longer considered a *science* or way of living the good life, but rather a loosely defined study of *human character*.¹⁵² Although Demonax (2d century A.D.), like most of the Late Stoics, called philosophy the foremost cure of the morally sick soul,¹⁵³ he saw in it above all that intelligent general attitude or disposition of man which frees him from all entanglements with things external that are beyond his control. True philosophers, like truly happy men, are only those who neither hope for nor fear anything; in other words, those who are always conscious of the vanity of everything human.¹⁵⁴ Dio Chrysostom (c. 40-110)¹⁵⁵ likewise defined philosophy as the foremost effort to heal the moral ills of mankind.¹⁵⁶ Philosophy,

¹⁵⁰ This is particularly true of Musonius and Epictetus. On the whole, Stoic philosophy contains certain elements which are Antisthenian in origin. Cf. Diog. Laert., 7. 2-5.

¹⁵¹ The more important of these Late Cynics were: Demetrius, Oenomaus of Gadara, Demonax of Cyprus, Dio Chrysostom (or, Dio of Prusa), and Peregrinus Proteus.

¹⁵² The interest in the study of human character might be traced back to Aristotle. The rather detailed enumeration and description of the various individual ethical virtues by Aristotle—the *Nic. Eth.* (1107 a 28 ff.) mentions thirteen, while the *Eudem. Eth.* (1220 b 38 ff.) fourteen, and the *Rhetoric* (1366 b 1 ff.) nine—indicate not only Aristotle's keen sense of observation, but also his profound interest in the study of human character. This interest had a lasting influence on the Peripatetic tradition and found expression in the ἡδικοὶ χαρακτήρες of Theophrastus. Cf. also Epicharmus, frag. 258 (Kaibel): "Character (τῆρος) is a man's good guiding principle (δαμων)." Heraclitus of Ephesus, frag. 119 (Diels): "Character (ἦθος) is the guiding spirit of man (δαμων)." Meander, *Epitrepontes* 479 ff.

¹⁵³ In Lucian: *Demonax*, 6 ff.

¹⁵⁴ *Ibid.*, 20. Cf. *ibid.*, 4.

¹⁵⁵ Cf. H. v. Arnim, *Leben und Werke des Dion von Prusa* (Berlin, 1898); H. v. Arnim, *Dionis Prusaensis . . . quae extant omnia* (Berlin, 1893-96); L. Dindorf, *Orationes recogn. et pref.* (Leipzig, 1857).

¹⁵⁶ *Orat.*, 13 (p. 431, Dindorf); *orat.* 12 (p. 374 ff., Dindorf).

which in itself is virtue and the truly happy life,¹⁵⁷ actually means nothing else than living the righteous and simple life.¹⁵⁸ Lucian, who wrote shortly after the death of Marcus Aurelius (180 A. D.), considered philosophy the expression of practical wisdom and plain common sense. It is primarily an attitude or disposition of the human soul, as well as a general direction of the human will; thus it cannot be based upon or even satisfactorily explained by any scientific method or system. It was this conception of philosophy, which identified it with common sense, that induced Lucian to ridicule and despise all "professional" philosophers.¹⁵⁹

To Epicurus¹⁶⁰ and his followers¹⁶¹ philosophy meant "that

¹⁵⁷ *Orat.*, 23 (p. 515, Dindorf).

¹⁵⁸ *Orat.*, 13 (p. 431, Dindorf).

¹⁵⁹ *Piscat.*, 5 ff.

¹⁶⁰ Cf., in general, H. Usener, *Epicurea* (Leipzig, 1887), and the many writings of E. Bignone on Epicurus and the Epicureans. See also Ueberweg-Heinze, *Geschichte der Philosophie*, 12th edit. (Praechter), I. 436 ff., and pp. 133 ff. of bibliography.

¹⁶¹ The more important Epicureans were: Metrodorus of Lampsacus; Polyaeus of Lampsacus; Hermachus of Mytilene; Colotes of Lampsacus; Idomeneus of Lampsacus; Polystratus; Dionysius; Philonides; Basilides; Demetrius of Laconia; Apollodorus; Zeno of Sidon; Phaedrus the Epicurean; Philodemus; Lucretius Carus; and Asclepiades of Bithynia. Perhaps no other school of philosophy adhered more strictly to the original tenets laid down by its founder than the Epicureans. Owing to the fact that Epicurus enjoyed a tremendous reputation among his followers, it should not surprise us that his disciples did not dare to change, challenge, or modify to any noticeable degree the teachings of the master. Cf., for instance, Seneca, *Epist.*, 33. 4; Eusebius, *Praep. Evang.*, 14. 5. 3 ff. In their efforts merely to restate or paraphrase again and again the "Sovereign Maxims" (κύρια δόξαι, in Diog. Laert., 10. 36 ff.) of the master, his pupils were neither inclined to pay any attention to the achievements of other philosophers nor apparently capable of appreciating their ideas. Cf. Cicero, *De nat. deor.*, 2. 29. 73; Macrobius, *De somnio Scipionis*, 1. 2; Diog. Laert., 10. 8. This general lack of genuine philosophical productivity among the followers of Epicurus; this inability or unwillingness to build upon and expand the foundations laid down by their first teacher, in itself is the most eloquent condemnation of the philosophical significance and value of Epicureanism. The mere mechanical repetition or restatement of memorized sentences or dicta (cf. Diog. Laert., 10. 12; Cicero, *De fin.*, 2. 7. 20) does not speak very well for the philosophical ability of the disciple. For mere profession of abject loyalty to the founder of a school of thought cannot be considered sufficient compensation or excuse for the mental laziness or lack of speculative ability on the part of the pupil. A philosophy which, like Epicureanism, fails to stimulate

kind of action or activity which through the proper employment of rational discussions and ratiocination guarantees a life of bliss."¹⁶² Theoretical knowledge and mere learning, however, contribute little—and then only indirectly—to such a life. Hence theoretical knowledge is to be tolerated only if it helps to promote our understanding of what constitutes right, that is to say, rational conduct.¹⁶³ The true philosopher or "wise man" is one who has the right and pious conception of the nature of the gods—one who possesses a real appreciation of all earthly goods and also does not dread death. He is at the same time one who does not acknowledge a pre-ordained fate, and who therefore rises above the contingencies of everyday life through his genuine wisdom and profound insight.¹⁶⁴ In other words, he is one who in his retirement from an unpleasant and noisy world (λάθε βιώσας) lives like a king among men, enjoying everlasting pleasures.¹⁶⁵ These basic views of Epicurus were later restated by Diogenes of Oinoanda,¹⁶⁶ who defined philosophy as that spiritual guide which will liberate man from the dread of the gods, from a fear of death, pain, and sorrow, and restrain him from desiring things in excess of his natural needs.¹⁶⁷ This definitely one-sided emphasis on the practical issues relegates all theoretical or speculative inquiry to a secondary or ancillary position.¹⁶⁸ Even physics or natural

the disciple to intellectual originality or intelligent independence, which, in other words, calls for accurate scholiasts rather than productive thinkers, effectively condemns itself.

¹⁶² Sextus Empiricus, *Adv. Math.*, 11.169: *Ἐπικούρος ἔλεγε τὴν φιλοσοφίαν ἐνεργεῖαν εἶναι λόγοις καὶ διαλογισμοῖς τὸν εὐδαίμονα βίον περιποιούσαν*. Cf. Diog. Laert., 10.122.

¹⁶³ Cicero, *De fin.*, 1.21.71: "Nullam eruditionem esse duxit, nisi quae beatae vitae disciplinam adiuveret." *Acad.*, II.33.206; Diog. Laert., 10.6; Plutarch, *Ne suaviter vivi posse* . . . , 12.1; 13.1; Athenaeus, *Deipnos.*, 13.58A; Sextus Empiricus, *Adv. Math.*, 1.1.

¹⁶⁴ Diog. Laert., 10.135.

¹⁶⁵ Diog. Laert., 10.130.

¹⁶⁶ He lived during the second century after Christ.

¹⁶⁷ *Frag.*, 1.3; 2.4.6; 16.1; 29.1.2 (edit. Williams).

¹⁶⁸ We have already pointed out that Epicurus denied the value of learning for learning's sake. Cf. note 163, *supra*. Undoubtedly his hostile attitude towards learning only reflects Epicurus' own lack of solid erudition. Cf. Sextus Empiricus,

philosophy, which in a naturalistic and materialistic type of philosophy such as Epicureanism might be expected to hold a rather prominent position, is not dealt with by the Epicureans for its own sake, but merely on account of the practical or pragmatic significance it has for the proper adjustment of life.¹⁶⁹ The sole purpose of a correct understanding of nature and the natural causes is to relieve the soul from fear and superstition. Thus, according to Epicurus, if we were not visited by such fears, we would not need any natural philosophy at all.¹⁷⁰ The fourfold function of natural philosophy and, as a matter of fact, of all philosophy is, therefore, the "*fortitudo contra mortis timorem; constantia contra metum religionis; sedatio animi omnium rerum occultarum ignoratione sublata; moderatio natura cupiditatum generibusque earum explicatis.*"¹⁷¹

While Philo of Larissa,¹⁷² the disciple of Cleitomachus,¹⁷³ compared philosophy to a physician,¹⁷⁴ Cicero¹⁷⁵ defined it as

Adv. Math., 1. 1; Diog. Laert., 10. 4; Cicero, *De fin.*, 1. 7. 26: "Vellem equidem, aut ipse doctrinis fuisset instructor—est enim . . . non satis politus iis artibus quas qui tenent eruditi appellantur—aut ne deterruisset alios a studiis." Athenaeus, *Deipnos.*, 13. 58A. — It seems, therefore, that Epicurus turned his own shortcomings into a principle of philosophy. Cf. Cicero, *De fin.*, 1. 21. 71. No wonder that Epicurus treated with contempt the efforts of logicians, grammarians, historians, dialecticians, and mathematicians. See also Diog. Laert., 6. 73, where Diogenes of Sinope expresses his contempt for music, geometry, astronomy, and like studies.

¹⁶⁹ Cicero, *De fin.*, 1. 19. 63. — Similar ideas had already been expressed by Aristippus. Cf. Diog. Laert., 2. 68; 2. 72.

¹⁷⁰ Diog. Laert., 10. 82; 10. 85; 10. 87; 10. 112; 10. 79; 10. 143; Cicero, *De fin.*, 4. 5. 11; Lucretius, *De rer. nat.*, 1. 62 ff.; 3. 14 ff.; 6. 9 ff.; Plutarch, *Ne suaviter vivi posse* . . . , 8. 7.

¹⁷¹ Cicero, *De fin.*, 1. 19. 63 ff.

¹⁷² Cf. Schmekel, *op. cit.*, 385 ff.; C. Grysar, *Die Akademiker Philon und Antiochus* (Köln, 1849).

¹⁷³ Cicero, *Acad.*, II. 6. 17.

¹⁷⁴ Stobaeus, *Eclog.*, 2. 40: . . . εοικναι δέ φησι τὸν φιλόσοφον ιατρῶ . . . καὶ γὰρ τῇ ιατρικῇ σπουδῇ πᾶσα περὶ τὸ τέλος, τοῦτο δ' ἦν ὑγίεια, καὶ τῇ φιλοσοφίᾳ περὶ τὴν εὐδαιμονίαν.

¹⁷⁵ In order to understand Cicero's sceptical eclecticism we have to realize that at one time or another he came into contact with all of the various philosophical schools which were then dominant in the Hellenistic-Roman world. He studied under Phaedrus the Epicurean; Philo the Academician; Diodotus the Stoic; Antiochus of Ascalon, the Academician; Zeno the Epicurean; and Posidonius the Stoic eclectic. It should be noted, however, that Cicero's scepticism and eclecticism

the *ars vitae* and "the mother of all arts."¹⁷⁶ To him it is "the true invention of the gods,"¹⁷⁷ the "understanding of things both divine and human, and, at the same time, the comprehension of the first principles and causes of everything."¹⁷⁸ Philosophy, to be sure, starts with doubt and scepticism. But scepticism is merely the first step in the direction of a more positive conviction. Even though we will have to concede that such a positive conviction—which, after all, can be no more than reasonable approximation of truth—still lacks absolute scientific certainty, we are nevertheless confident that this approximation furnishes a sufficient basis for practical action which constitutes the true end of philosophy. This view is brought out once again in Cicero's famous statement that "*omnis auctoritas philosophiae consistit in beata vita comparanda.*"¹⁷⁹ Hence the discovery of what is reasonably probable forms the first task of all philosophical inquiry. Scepticism is only a means or prerequisite for the achievement of this all-important task.¹⁸⁰ The treatment of truly practical and practically relevant problems or, to put it more poignantly, the intuitive certainty of man's moral conscience is to Cicero the dominant issue of all philosophy.¹⁸¹ Admittedly, science and knowledge of the theoretical type constitute a good.¹⁸² But they never are a good in themselves, but rather on account of their effects on man's action and conduct. In this sense, and

are not so much the result of original thinking on his part, but rather the product of a pronounced "*hesitatio iudicii*" in the face of so many conflicting philosophies with which he came in contact during his lifetime. Cf. *Acad.*, II. 42; II. 48. 147.

¹⁷⁶ *De fin.*, 2. 2. Cf. David, *Proleg. et in Porphy. Isag. Comment.*, 21. 12 ff., in *Comment. in Arist. Graec.*, 18. 2. Cf. note 304, *infra*.

¹⁷⁷ *Tuscul.*, 1. 26. 64.

¹⁷⁸ *Tuscul.*, 5. 3. 7.—This definition is patently Stoic; it is, as a matter of fact, nothing else than a Latin translation of the most prominent Stoic definition of philosophy. Cf. notes 50 and 77, *supra*.

¹⁷⁹ *De fin.*, 5. 29. This statement was undoubtedly prompted by the influence of Theophrastus' *περί εὐδαιμονίας*.

¹⁸⁰ *De fin.*, 5. 28. 79.

¹⁸¹ Cf. *De legibus*, 1. 13. 39.

¹⁸² *De fin.*, 1. 7. 25; 4. 5. 12; *Tuscul.*, 5. 24 ff.; *De nat. deor.*, 2. 1. 3; *Acad.*, II. 41. 127; *Tuscul.*, 5. 3. 9; 5. 24. 69. Cf. St. Augustine, *De Trinitate*, 14. 9.

in this alone, theoretical knowledge may be regarded as a vital part of general philosophy. For theoretical knowledge and the speculative sciences achieve their ultimate purpose only in action, and action is always superior to theory.¹⁸³ Hence the ascertainment of the highest moral good signifies the most pressing and decisive issue of all philosophy.¹⁸⁴

In spite of the uncertainty and limitation of human knowledge and human reason this ultimate end of philosophy can be fully achieved.¹⁸⁵ For while philosophy in general tells us nothing with absolute certainty, it nevertheless endows us with a certain intuitive truth, sufficient to distinguish and determine the things which are most important. In this, philosophy becomes the true *dux vitae*.¹⁸⁶ M. Terentius Varro,¹⁸⁷ the erudite friend of Cicero and disciple of Antiochus of Ascalon, saw the whole purpose of philosophy in bringing about the moral happiness of man. Only those philosophical teachings, we are told, which contribute to the moral edification and improvement of man, are worthy of being taken seriously.¹⁸⁸ Philosophy deals primarily with the relation of virtue to what is "according to nature."¹⁸⁹ Thus, the basic issue of philosophy revolves around the question whether for the sake of virtue we should strive after what is "according to nature"; or whether for the sake of what is "according to nature" we should strive after virtue; or whether we should strive after both for the sake of both.¹⁹⁰ In any event, the practical ordination of philosophy as well as the emphasis on the elementary demands and needs

¹⁸³ *De officiis*, 1. 34. 153; 1. 9. 28; 1. 21. 71. Cf. Seneca, *Epist.*, 20. 2: "Facere docet philosophia, non dicere."

¹⁸⁴ *De fin.*, 5. 6. 15: "... hoc [scil., summo bono] constituto in philosophia constituta sunt omnia. . ."

¹⁸⁵ *Acad.*, 1. 4. 15; *De fin.*, 2. 1. 1; *Tuscul.*, 5. 4. 10.

¹⁸⁶ *Tuscul.*, 5. 2. 5.

¹⁸⁷ Cf., in general, Teuffel-Kroll-Skutsch, *Geschichte der römischen Literatur*, 6th edit. (Leipzig-Berlin, 1916), par. 165 ff.

¹⁸⁸ Cf. St. Augustine, *De civ. Dei*, 19. 1-3.

¹⁸⁹ St. Augustine, *op. cit.*, 19. 3. 2.

¹⁹⁰ St. Augustine, *op. cit.*, 19. 2.

of natural, practical life, are the salient points in Varro's definition of philosophy.¹⁹¹

* * *

The Sceptic point of view,¹⁹² not only espoused by Pyrrho of Elis (c. 360-c. 270),¹⁹³ Timon of Phlius (c. 320-c. 230),¹⁹⁴ Aenesidemus of Cnossos (1st century B. C.),¹⁹⁵ and Sextus Empiricus (died c. 150 A. D.),¹⁹⁶ but also propagated to some extent by certain members of the so-called Middle Academy,¹⁹⁷ held it to be the prime task of all philosophy to investigate the nature of things, not only in order to establish man's proper relation to these things, but also in order to enable man to know what he might or might not expect from them.¹⁹⁸ According to the general position held by the Sceptics, it is evident that we can never know the true and objective nature of things.¹⁹⁹ For these things are without constant features, just as is our experience of them, and, hence, cannot fully be

¹⁹¹ In this Varro is definitely under the influence of his teacher Antiochus of Ascalon.

¹⁹² Cf. Diog. Laert., 9. 61-116; Suidas on "Pyrrho" and "Timon." See also R. Hirzel, *Untersuchungen zu Ciceros philosophischen Schriften* (Leipzig, 1877-1883); E. Bevan, *Stoics and Sceptics* (Oxford, 1913); E. Pappenheim, *Die Tropen der griechischen Skeptiker* (Berlin, 1885); H. Diels, *Poet. philos. frag.* (Berlin, 1901), 182 ff.; C. Wachsmuth, *Corpusculum poesis epicae graecae ludubundae*, fasc. 2 (Leipzig, 1885).

¹⁹³ Cf. Sextus Empiricus, "*Pyrrhonia*."

¹⁹⁴ C. Wachsmuth, *op. cit.*; H. Diels, *op. cit.* Cf. note 192, *supra*.

¹⁹⁵ Cf. Photius, *Biblioth.*, cod. 212 (Πυρρώνειοι λόγοι).

¹⁹⁶ Cf. H. Mutschmann's edition of the Πυρρώνειων ὑποτυπώσεων, *libri tres* (Leipzig, 1912).

¹⁹⁷ The main representatives of the Middle Academy were: Arcesilaus (or, Acesilas, 315/14-241/40); Lacydes of Cyrene (died c. 224); Telecles (died c. 215); Euandrus; Hegesinus; Carneades (died c. 128); Cleitomachus (died c. 110), and Charmadas. Cf. Diog. Laert., 4. 28-67.—Philo of Larissa, originally also a spokesman of the sceptic tradition of the Middle Academy, later refuted Academic Scepticism. Cf. also Suidas and his various "articles" on the members of the Middle Academy; E. Zeller, *Philos. d. Griech.*, 3d edit., 3. 1, pp. 478 ff.

¹⁹⁸ Eusebius, *Praep. Evang.*, 14. 18. 2 (quoting Aristocles).

¹⁹⁹ Eusebius, *Praep. Evang.*, 14. 18. 12; Diog. Laert., 9. 61; 9. 76; 9. 114; 9. 105; 9. 106 (Aenesidemus); Sextus Empiricus, *Adv. Math.*, 11. 140; Gellius, *Att. noct.*, 9. 5. 4.

determined.²⁰⁰ Neither can we ever trust our sense perceptions, because, owing to the inconsistency of the things perceived, these sense perceptions themselves can never definitely be called either true or false, right or wrong.²⁰¹ This being so, it is also impossible to determine man's relationship to things or to establish with any degree of certainty the consequences which will result from our actions.²⁰² Hence the argument is advanced that, because there is no such thing as a true or reliable knowledge, and because about every statement of fact an equally valid contradictory statement can be made,²⁰³ right action also is impossible.

Under such distressing circumstances the true philosopher or "wise man" refrains as far as possible from committing himself either in a stated opinion or in a conclusive act.²⁰⁴ In this fashion philosophy turns into a completely negative attitude towards the world—an attitude, that is to say, which counsels complete suspension of any form of judgment or action.²⁰⁵ The only thing that might be of conceivable worth is virtue and the peace of mind which virtue is capable of giving us.²⁰⁶ Thus philosophy and that sort of happiness which is derived from philosophy, consist in falling back on our own intellectual resources.²⁰⁷

Essentially the same problems re-emerge in Aenesidemus and his followers,²⁰⁸ who actually reduce philosophy to a means of attacking and ridiculing all the existing philosophies by insist-

²⁰⁰ Eusebius, *Praep. Evang.*, 14.18.2; Cicero, *De fin.*, 4.16.43.

²⁰¹ Eusebius, *Praep. Evang.*, 14.18.2; Diog. Laert., 9.103; Sextus Empiricus, *Adv. Math.*, 11.1.

²⁰² Diog. Laert., 9.61; 9.107.

²⁰³ The so-called *ισοσθένεια τῶν λόγων*.

²⁰⁴ The so-called *ἀφασία*, or *ἀκαταληψία*, or *ἀγνοσία*. Cf. Diog. Laert., proem. 16; 9.61; 9.69 ff.; 9.74 ff.; 9.107; Eusebius, *Praep. Evang.*, 14.18.2.

²⁰⁵ Diog. Laert., 9.62; 9.66 ff.; Cicero, *De fin.*, 2.13.43; 3.3.11; 3.4.12; 4.16.43; Eusebius, *Praep. Evang.*, 14.18.2.

²⁰⁶ Cicero, *De fin.*, 4.16.43: "Pyrrho . . . qui virtute constituta nihil omnino quod appetendum sit relinquat." Cf. *ibid.*, 2.13.43; 3.4.12.

²⁰⁷ Cicero, *De fin.*, 2.13.43; Stobaeus, *Florileg.*, 121.28.

²⁰⁸ Cf. Sextus Empiricus, "*Pyrrhonia*," 1.164 ff.; 1.236 ff.; *Adv. Math.*, 9.137 ff.; 9.207 ff.; Diog. Laert., 9.88 ff.

ing on the complete relativity of everything.²⁰⁹ And the same holds true of Arcesilaus of the Middle Academy, who, by refusing to admit any firm foundation of philosophy,²¹⁰ merely essayed to disprove the validity of the teachings of all other philosophers.²¹¹ He conceded, however, that scientific probability constitutes a sufficient basis for practical action,²¹² implying, thereby, that philosophy is at best a "theory of probability."²¹³ This identification of philosophy and "theory of probability" was further developed by Carneades (c. 212—c. 128) with great acumen.²¹⁴

The so-called Platonists of the first two centuries after Christ,²¹⁵ (who are called Platonists or representatives of "Middle Platonism" mainly on account of their rather lengthy and thorough commentaries to the works of Plato)²¹⁶ were in fact eclectics. Thus Albinus (2d century A. D.),²¹⁷ when defining philosophy, used the well known Platonic dictum, later adopted by the Stoics, which declared it the *ᾠρεξις σοφίας*,—the

²⁰⁹ Cf. Sextus Empiricus, "*Pyrrhonia*," 1. 39; 1. 135 ff.; Gellius, *Att. noct.*, 9. 5. 7.

²¹⁰ Sextus Empiricus, *Adv. Math.*, 7. 155; Plutarch, *Adv. Coloten*, 16. 2; Cicero, *Acad.*, I. 12. 44 ff.; II. 20. 66; *De oratore*, 3. 18. 67; Eusebius, *Praep. Evang.*, 14. 4. 16; 14. 6. 4.

²¹¹ Cicero, *De fin.*, 2. 1. 2; 5. 4. 11; *De oratore*, 3. 18. 67; Diog. Laert., 4. 28.

²¹² Sextus Empiricus, *Adv. Math.*, 7. 158.

²¹³ Cf. Plutarch, *De tranquillitate animae*, 9.

²¹⁴ Sextus Empiricus, *Adv. Math.*, 7. 159; 7. 160-163; 7. 166; 7. 167-170; 7. 173; Cicero, *Acad.*, II. 3. 40 ff.; II. 26. 83; II. 9. 28. — The view that "probability" constitutes the sole form of philosophy or philosophical knowledge which could safely be maintained, is also found in Favorinus. Cf. Gellius, *Att. noct.*, 20. 1. 9; Plutarch, *Quaest. symposica*, 8. 10. 2.

²¹⁵ This Platonist movement should not be confounded either with the Middle or Late Academy or the Neo-Platonic tradition; hence it might perhaps best be called "Middle Platonism." This "Middle Platonism" had a great influence on the rise and development of Neo-Platonism.

²¹⁶ The more important members of "Middle Platonism" are: Dercylides, who wrote eleven books on Plato's philosophy; Eudorus of Alexandria, who wrote a commentary to Plato's *Timaeus*; Thrasyllus (he wrote during the reign of Tiberius), who became famous through his tetralogical grouping of Plato's works; Plutarch of Chaeronea; Theon of Smyrna; Gaius, who wrote an *Outline of Plato's teachings*; Albinus, who wrote a *Prologue to Plato's dialogues* and the *Didascalicus* (also called *Isagoge* or *Epitome*).

²¹⁷ Cf. E. Alberti, "Über des Albinos Isagoge," in *Rhein. Mus.*, 13 (1858), 76-100.

longing after wisdom. And this wisdom itself is nothing other than the science of things both divine and human.²¹⁸ At the same time, by falling back on a famous Platonic definition, he also called it the λύσις καὶ περιαγωγή τῆς ψυχῆς ἀπὸ σώματος—the soul's delivery from and rising above the body.²¹⁹ Theon of Smyrna (who wrote during the reign of Hadrian),²²⁰ decidedly under the influence of Plato's *Republic*,²²¹ spoke of the purifying effects of philosophy on the human soul.²²² He also recommended the study of philosophy because it is philosophy which makes us like God as far as this is possible²²³—a statement which he probably found in Plato's *Theaetetus* and *Republic*.²²⁴ Eudorus of Alexandria (last half of the first century B. C.),²²⁵ in his *περὶ τέλους*,²²⁶ likewise defined the function and end of philosophy as the ὁμοίωσις θεῷ κατὰ τὸ δυνατόν,²²⁷ as did Gaius (first half of the second century A. D.)²²⁸ and Albinus.²²⁹

²¹⁸ *Didascalicus*, edit. Hermann, p. 152: ἐπιστήμη θεῶν καὶ ἀνθρώπων πραγμάτων.

²¹⁹ *Didasc.*, p. 152. Cf. Plato, *Phaedo*, 64A; 80E.

²²⁰ Cf. P. Tannery, "Sur Théon de Smyrne," in *Rev. de philolog.*, 18 (1894), 145-152; G. Borghorst, *De Anatolii Fontibus* (Berlin, 1905).

²²¹ *Republ.*, 527 D; Porphyry, *Vit. Pythag.*, 46; Lucian, *Vit. auct.*, 3; Stobaeus, *Eclóg.*, 2. 40. 11 ff. About the κάθαρσις doctrine, cf. H. Diels, *Frag. d. Vorsokrat.*, 45 D 1.

²²² Plato had already mentioned the cathartic nature of philosophy and particularly of the mathematical sciences (*Republ.*, 527 D). Theon of Smyrna, probably under the influence of Pythagorean teachings, distinguished five steps in the "ascendency" of philosophy: (a) the κάθαρσις through mathematics, geometry, astronomy, and music; (b) the mastery of such primarily philosophical topics as logic, politics, and physics; (c) the preoccupation with intelligible natures such as the Ideas; (d) the ability of introducing others to pure philosophy; and (e) the final end of all philosophy and philosophical ascendency, the ὁμοίωσις θεῷ κατὰ τὸ δυνατόν. Cf. Theon of Smyrna, *Expositio* (edit. Hiller), 14. 8; 14. 18 ff.; 16. 16. See also note 221, *supra*.

²²³ In E. Hiller, *Theonis Smyr. philos. Plat. expositio* . . . , 14. 8; 14. 18 ff.; 16. 16: ὁμοίωσις θεῷ κατὰ τὸ δυνατόν.

²²⁴ *Theaet.*, 176B; *Republ.*, 613AB.

²²⁵ Cf. E. Martini, "Eudoros," in *Pauly-Wissowa*.

²²⁶ In Stobaeus, *Eclóg.*, 2. 42. 8 ff.

²²⁷ *Ibid.*, 2. 49. 8.—Eudorus, however, ascribes this definition to Pythagoras as well as to Plato.

²²⁸ In Albinus, *Didasc.*, 28 (p. 181).

²²⁹ *Didasc.*, 28 (p. 181): *Prologue*, 6 (p. 151). It should be noted here that

Thus Eudorus of Alexandria, Gaius, and Albinus in more than one sense might be called the immediate predecessors of Plotinus, who also based all philosophy and virtue upon the *πρὸς τὸν θεὸν ὁμολώσεις*.²³⁰

Like Cicero²³¹ and the majority of the Late Stoics, Plutarch (c. 45—c. 125) conceived the main task of philosophy to consist in its moral effects upon man. Only beginners, as a rule, turn towards logic and physics, while those who really understand the meaning of philosophy consider it something which develops the moral character of man.²³² Philosophy is, first of all, an art, namely the art of healing the morally sick soul.²³³ Hence the true philosopher, according to Plutarch, assumes a rather sceptical attitude towards those philosophical systems which attempt to explain everything in terms of concepts or definitions.²³⁴

Decidedly under the influence of Plato (particularly the famous passages from the *Theaetetus*,²³⁵ *Phaedo*,²³⁶ and the *Republic*),²³⁷ were Eudorus of Alexandria,²³⁸ Gaius,²³⁹ Albinus,²⁴⁰

Albinus' ethics is primarily the *ἐπιστήμη καὶ θεωρία τοῦ πρώτου ἀγαθοῦ*. (*Didasc.*, 27, p. 179.) The ultimate purpose of ethics, however, is the *ὁμολώσις θεῷ κατὰ τὸ δυνατόν* (*ibid.*, 28, p. 181). This all-pervading end or significance of ethics has both a theoretical and a practical aspect (*Prologue*, 6, p. 151). Hence the *ὁμολώσις θεῷ* constitutes the basic meaning of the whole of Albinus' philosophical system. Juncos (or Juncus) also defined the end of philosophy and its true significance as the *ὁμολώσις θεῷ*. Cf. Stobaeus, *Florileg.*, 117.95. The authority or source used by Diogenes Laertius likewise declared the *ἐξομολώσις τῷ θεῷ* the ultimate end and meaning of philosophy, and of ethics in particular. Cf. Diog. Laert., 3.78 ff.

²³⁰ *Ennead*, 1.2.1; 1.2.3: *θεῷ ὁμοιωθῆναι*.

²³¹ *De fin.*, 5.29: "Omnis auctoritas philosophiae consistit in beata vita componenda."

²³² Plutarch, *De profectibus in virtute*, 7. Cf. Adv. Coloten, 3.6.

²³³ Plutarch, *De cohibenda ira*, 2.

²³⁴ Plutarch, *De defectu oraculorum*, 37; *De sera numinis vindicta*, 4; *De Pythiae oraculis*, 30.

²³⁵ *Theaet.*, 176B.

²³⁶ *Phaedo*, 62B; 66B; 67A.

²³⁷ *Republ.*, 613AB. Cf. Aristotle, *Nic. Eth.*, 10.7.

²³⁸ In Stobaeus, *Eclog.*, 2.48.8 ff.

²³⁹ Anonym. in *Theaet.*, col. 7.14; Albinus, *Prologue*, 6 (p. 151); Apuleius, *De Platone et eius dogmate*, 2.2.

²⁴⁰ *Prologue*, 5 (p. 151).

Theon of Smyrna,²⁴¹ Plotinus,²⁴² Philo of Alexandria,²⁴³ Julian the Apostate,²⁴⁴ and Themistius,²⁴⁵ with their definition of philosophy as "that which makes—or should make—us become like God as far as this is possible—the *ὁμοίωσις θεῷ κατὰ τὸ δυνατόν*. Likewise influenced by Plato's *Phaedo*²⁴⁶ are those definitions which called philosophy the meditation on death—*μελέτη θανάτου* or *μελέτη τοῦ ἀποθνήσκειν*;²⁴⁷ the release of the soul from its incarceration in the body—*λύσις καὶ περιαγωγή τῆς ψυχῆς ἀπὸ σώματος*;²⁴⁸ or the yearning for wisdom—*ὄρεξις σοφίας*.²⁴⁹ According to these authors, philosophy is primarily concerned with the salvation of the soul, the *τῆς ψυχῆς σωτηρία*.²⁵⁰ Galen, again, praised philosophy, which he identified with theology or religion, by calling it the most exalted gift of the gods,²⁵¹ as was also done by Ammonius, among others.²⁵² The Stoic influence, on the other hand, is still felt in Aristobulus²⁵³ and Albinus,²⁵⁴ who described philosophy as the *γνώσις θείων καὶ ἀνθρωπίνων πραγμάτων*—the knowledge and understanding of things both divine and human.

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The progressive transition of Hellenistic-Roman philosophy

²⁴¹ *Liber de astronomia*, 14. 8. 18 ff.

²⁴² *Ennead*, 1. 2. 1; 5. 8. 11.

²⁴³ *De caritate* (or, *De humanitate*), 23. 168, in vol. 5, p. 319, edit. Cohn-Wendland; *Legum allegoriarum libri tres*, 3. 9. Philo also points out (in *De opificio mundi*, 1. 144, in vol. 1, p. 50, edit. Cohn-Wendland) that the ultimate and highest task of man is to become like God as far as this is possible: *μόναῖς ψυχαῖς θέμις προσέρχεσθαι τέλος ἡγουμέναις τὴν πρὸς τὸν γεννήσαντα θεὸν ἐξομοίωσιν*.

²⁴⁴ *Orat.*, 6 (p. 238, 3, edit. Hertlein).

²⁴⁵ *Orat.*, 2 (p. 39, 6, edit. Dindorf); *orat.*, 24 (p. 417, 16, edit. Dindorf).

²⁴⁶ *Phaedo*, 80E; 67C; 81A; 64A.

²⁴⁷ Plutarch, *De sera numinis vindicta*, 18 ff.

²⁴⁸ Albinus, *Didasc.*, 1. Cf. Apollonius of Tyana, in Philostratus, *Vita Apoll. Tyana.*, 8. 25. 4.

²⁴⁹ Albinus, *Didasc.*, 1.

²⁵⁰ Porphyry, in Eusebius, *Praep. Evang.*, 4. 8. 1; 14. 10. 5.

²⁵¹ *Protrepticus*, 1.

²⁵² In Ammonius, *Comment. in Porphyrii quinque voces*, 2. 12 ff., in *Comment. in Arist. Graec.*, 4. 3.

²⁵³ In Eusebius, *Praep. Evang.*, 13. 12. 12.

²⁵⁴ *Didasc.*, 1.

from an *ethico-practical* standpoint to a *religious-metaphysical* point of view brought about a gradual identification of religion (theology) and philosophy.²⁵⁵ The original hope of winning from certain generalized results of human reasoning and human knowledge a conviction for the practical guidance of life finally culminated in the effort to create a new and profounder religious insight which would replace the old religious beliefs that had gradually been lost in the course of the centuries. Thus the Neo-Platonist Proclus actually proposed to have philosophy styled theology,²⁵⁶ a proposal which is, however, not without precedent, having already been made by Aristotle.²⁵⁷ In this fashion philosophy, particularly with the Neo-Platonists and Neo-Pythagoreans, became what we would call a sort of theosophy or "philosophy of religion," and in some instances was actually considered nothing else than a form of intellectual *ecstasis*.²⁵⁸ This view which saw philosophy as a form of theology, found some historical support not only in the works of Plato,²⁵⁹ Plutarch,²⁶⁰ and in that of certain Aristotelian²⁶¹ and Early Stoic authors,²⁶² but also in the writings of Philo of Alexandria.²⁶³ It is, ultimately, a religious or religio-metaphysical

²⁵⁵ Proclus, for instance, speaks no longer about the "philosophy" of Plato, but about ἡ Πλάτωνος θεολογία. Cf. Proclus, *Institutio Theologica* (Στοιχειώσις θεολογική).

²⁵⁶ Cf. note 255, *supra*.

²⁵⁷ Cf., among others, *Metaphys.*, 1026 a 18.

²⁵⁸ Cf., for instance, Plotinus, *Ennead*, 6.7.35; 5.9.10; Proclus, *Theologica Platonica*, 6.10 (p. 193 ff.); 1.24 (p. 60 ff.); 2.11 (p. 109); Numenius, *frag.* 10.51.

²⁵⁹ Cf. Plato, *Sympos.*, 218A: "The pang of philosophy is a madness and passion in man's longing for wisdom and knowledge." *Phaedo*, 83A: "Philosophy . . . received and gently comforted (the soul) . . ." *Republ.*, 490A: ". . . the true lover of knowledge . . . by drawing near, mingling with, and becoming incorporate with the very being, . . . will have knowledge and will live and grow truly. And then, and then only, will he cease from his travail." *Phaedrus*, 249B: ". . . the philosopher . . . is inspired. . . ." *Republ.*, 500C: ". . . holding conversation with the divine order he himself . . . become divine. . . ." *Phaedo*, 69C: ". . . the mystics . . . [are] the true philosophers." Cicero, *De orat.*, 2.46.194.

²⁶⁰ *De Iside et Osiride*, 77.

²⁶¹ We have but to remember the Aristotelian doctrine of the *θεωπλα*.

²⁶² Cf., for instance, the Stoic doctrine of the κατάληψις θείων καὶ ἀνθρωπίνων πραγμάτων.

²⁶³ *Quis rerum divinarum heres sit*, 14.68 ff. (p. 16 ff., vol. 3. edit. Cohn-Wendland); *De gigantibus*, 11.52 ff. (p. 52, vol. 2, edit. Cohn-Wendland).

development as well as an exegesis of certain aspects of Platonism and of some apocryphal works which paraded under the name of Plato and Pythagoras.

Already with such men as Seneca, Epictetus, and Marcus Aurelius, no less than with such popular moralists as Demonax, Dio Chrysostom, and Demetrius of Phaleron, or with the more serious Apollonius of Tyana, Moderatus of Gades, and Nicomachus of Gerasa, philosophy had turned into a *religious doctrine and message of salvation and redemption* based upon religious asceticism and renunciation of the world.²⁶⁴

According to Epictetus, all philosophy begins with a sensation of moral guilt, accompanied by a deep yearning for deliverance and salvation.²⁶⁵ It teaches man to look upon all things earthly as nothing more than smoke and, consequently, nothing at all.²⁶⁶ Thus philosophy can no longer consist in an independent roaming of the self-satisfied mind,²⁶⁷ but must be thought of in terms of a means of satisfying a deeply felt moral and emotional want. Philosophy is meant, more than anything else, to give comfort and spiritual strength to all those who seek lasting peace and solace.²⁶⁸ Marcus Aurelius exhorted his contemporaries:

Wander no longer at hazard, for neither wilt thou read thy own "memoirs" (*ἱπομνήματα*), nor the acts of the ancient Romans and Greeks, and the selections from books which thou wast reserving for thy old age. Hasten then to the end which thou hast before thee, and, throwing away idle hopes come to thy own aid, if thou carest at all for thyself, while it is in thy power.²⁶⁹

²⁶⁴ Cf. A.-H. Chroust, *loc. cit.*, 54.

²⁶⁵ *Discourses*, 2.11.1: "The beginning of philosophy, at least to those who enter upon it in a proper way, . . . is a consciousness of our own weakness and deficiency. . . ."

²⁶⁶ Marcus Aurelius, *Thoughts*, 10.81.

²⁶⁷ This was the case with Aristotle. Cf. *Metaphys.*, 982 a 5 ff.

²⁶⁸ This is also true as regards Boëthius, according to whom philosophy is the consolation of the afflicted. Cf. the whole tenor of his *De consolazione philosophia*.

²⁶⁹ *Thoughts*, 3.14. Cf. *ibid.*, 5.11.—The Cynics had already told their listeners not to waste their time with reading or writing, because these are useless occupations which only distract man from his true purpose, namely the practice of good life. Cf. Diog. Laert., 6.103; 6.27-28. Similar ideas were also expressed by Seneca.

Obviously, then, philosophy is primarily a doctrine and message of salvation. As a matter of fact, many of the definitions of philosophy devised by Epictetus and Marcus Aurelius are definitely religious or religio-mystical in character. In the words of Epictetus, philosophy signifies something mysterious and holy, an undertaking of utmost urgency which cannot be entered upon without divine assistance.²⁷⁰ The true philosopher is like a priest and minister of the gods,²⁷¹ a messenger dispatched by Zeus in order to teach mankind;²⁷² for the deity speaks above all through the mouth of the philosopher.²⁷³ Plutarch assumed outright that, if philosophy shall at all promote moral life, it can do so only on the basis of piety and faith in God.²⁷⁴ Hence philosophy reaches its absolute climax as well as attains its final justification in theology.²⁷⁵ Any philosophy that loses sight of this supreme purpose deprives man of the greatest source of inner happiness and spiritual contentment.²⁷⁶

The so-called Neo-Pythagoreans²⁷⁷ likewise looked upon philosophy as being a means to attain the saintly and God-pleasing life rather than as an instrument to acquire knowledge and the understanding of nature. Philosophy is "the way to God and the communion with God" which can only be achieved

²⁷⁰ *Discours.*, 3. 22. 6; 3. 22. 1. Cf. *ibid.*, 3. 21. 1.

²⁷¹ Marcus Aurelius, *Thoughts*, 3. 4.

²⁷² Epictetus, *Discours.*, 3. 22. 3; 4. 8. 6. Cf., in this connection, Plato, *Protag.*, 322 C: "Zeus . . . sent Hermes to them, bearing a sense of moral restraint (*αἰδώς*) and a feeling for what is right and just (*δίκη*)."

²⁷³ Epictetus, *Discours.*, 3. 1. 7.

²⁷⁴ *De Iside et Osiride*, 3.

²⁷⁵ Plutarch, *De defectu oraculorum*, 3: φιλοσοφία θεολογίαν . . . τέλος ἐχούσης.

²⁷⁶ Plutarch, *Ne suaviter vivi posse* . . . , 20 ff.; 21.5; 22.4; 23.1.—It should be noted here that Plutarch considered religion or theology, and not politics, the ultimate end of all ethics. In this he differs fundamentally from the "classical" view of Greek ethical thought.

²⁷⁷ The more important Neo-Pythagoreans were: Nigidius Figulus, the friend of Cicero; Ocellus; Apollonius of Tyana, who lived during the first century after Christ; Moderatus of Gades, a contemporary of Apollonius; Nicomachus of Gerasa, who lived around 140 A. D.; Numenius of Apamea, who lived during the second half of the second century after Christ; and Philostratus, who lived during the first part of the third century.

by the purity of life and by turning away from all earthly things.²⁷⁸ The foremost task of philosophy, according to Apollonius of Tyana, consists in disseminating the true knowledge of God and in teaching sincere piety.²⁷⁹ Following the example of Plato's *Phaedo*, Apollonius also held that philosophy is capable of liberating man from a state of bodily incarceration, into which we have been thrown because of our attachment to the sensual world.²⁸⁰ Numenius, again, in his effort completely to identify philosophy and theology (or religion), went so far as to prove that his philosophy fully coincided with the teachings and sayings of the prophets of the Old Testament.²⁸¹

The so-called Neo-Platonism,²⁸² in the final analysis, is overwhelmingly an attempt to bridge the infinite gap that separates man from God. This whole philosophical movement was prompted not only by a deep yearning for divine revelation, but also by the desire for an ultimate and abiding personal union of man with God; union or communion, that is to say, which constitutes the sole *σωτηρία*. Hence, immediate intuition, voluntarism, and religious ecstasy or mysticism, in short, a pronounced "meta-rational" foundation, became the basis of all philosophical quests for truth and moral bliss. It is, in other words, a "higher" metaphysics of religious ecstasy which forms the first principle as well as the ultimate end of all rational philosophy. Only by renouncing all physical existence, that is to say, by completely reverting to inner spiritual or mystic contemplation, can man's communion with God be achieved.²⁸³ And this introvert contemplation of the

²⁷⁸ In Stobaeus, *Florileg.*, 44. 20.

²⁷⁹ In Philostratus, *Vita Apoll. Tyan.*, 4. 40 ff.

²⁸⁰ In Philostratus, *op. cit.*, 8. 26. 4; 8. 7. 25 ff.

²⁸¹ In Porphyry, *De antro nymph.*, 10. Cf. Eusebius, *Praep. Evang.*, 9. 8; Macrobius, *De somnio Scipionis*, 1. 219. — Numenius also insisted that Plato was a Moses who spoke the Attic language. Cf. Clement of Alex., *Stromata*, 1. 432.

²⁸² The most famous Neo-Platonists were: Ammonius Saccas (c. 175-c. 242); Origen the Neo-Platonist, the teacher of Longinus; Longinus (c. 213-c. 273); Plotinus (c. 203/204-c. 269/270); Porphyry (c. 232/233-c. 310); Amelius, who lived during the second half of the third century; Jamblichus, who died during the reign of Emperor Constantine, and Proclus, who died in 485.

²⁸³ Plotinus, *Ennead*, 4. 8. 1.

spiritual essence is the beginning of all philosophy worthy of the name.²⁸⁴ Because of the spiritual origin and essence of all true being, man is always striving to free himself of all physical entanglements.²⁸⁵ It is, therefore, the prime task of true philosophy to direct this effort, and to act as the proper intermediary between the natural and the supernatural world: to guide man through the pitfalls of sensate experience and existence to the heaven of spiritual truth.²⁸⁶ For the ultimate object of philosophy consists in showing us the way to the spiritual visualization of the Ineffable One in Whom all conceptual definitions, all rational, voluntarist, and emotional truths, dissolve into a single, everlasting ecstasy of sublime vision.²⁸⁷ Such notions finally led to the realization that all philosophy or conceptual speculation is but an infinitely inadequate attempt to deal with the highest truth, that is, the sole truth worthy of our undivided attention—the Ineffable One. Thus philosophy turned into what might be called a mere metaphoric allegory of what is actually and forever beyond all scientific or systematic comprehension.²⁸⁸

The final purpose of philosophy, according to Porphyry, is to influence our lives by curing our spiritual ills no less than by purifying our thoughts and actions. But if philosophy should show us the road to true—spiritual—happiness, it can do so only if we ourselves are forever striving after true being. Rational knowledge and understanding constitute the only means of cleansing our mind. But rational knowledge and understanding by themselves are never of the essence of the perfect spiritual life.²⁸⁹ For of what use could philosophy be,

²⁸⁴ Proclus, *In Plat. Alcib. comment.*, in *Procli opera*, edit. V. Cousin (Paris, 1820-1825), 2. 13.

²⁸⁵ Plotinus, *Ennead*, 1. 11. 7; 4. 7. 12; 4. 8. 5; 4. 10; 1. 2. 3.

²⁸⁶ Plotinus, *Ennead*, 1. 4.

²⁸⁷ Plotinus, *Ennead*, 6. 7. 35; 6. 9. 4; 6. 9. 10; 5. 3. 14; 5. 8. 11; 5. 3. 1; 5. 4. 9 ff.

²⁸⁸ Cf. Damascius, *Dubitaciones et solutiones de primis principiis*, 38 (1. 79, lines 20 ff., edit. Ruelle); 4 (1. 83, 26 ff.); 42 (1. 85, 8 ff.); 107 (1. 278, 24 ff.). Cf. Jamblichus, *De mysteriis aegyptiorum* (edit. Parthey), 1. 3—The attitude of Damascius towards philosophy reminds us of the closing lines of Goethe's *Faust*, part 2: "Alles Vergängliche ist nur ein Gleichnis. . . ."

²⁸⁹ Porphyry, *De abstinentia*, 1. 20.

if it cannot cure the ills of the soul? What else is the philosopher than a physician of the morally sick soul?²⁹⁰ The one and only object of philosophy is the salvation of man's soul, the *τῆς ψυχῆς σωτηρία*.²⁹¹ The true meaning of philosophy is therefore a predominantly practical one, namely, to bring about a reform of religion and theology by combatting the various forms of superstition, and by restoring real piety.²⁹²

With Jamblichus, the theological or theurgical significance of philosophy became even more pronounced. Owing to the complete inability of human reason to gain by its own efforts any true understanding, philosophy proves itself incapable of attaining any valid knowledge without the aid of theology (or religion) and the assistance of the gods.²⁹³ Faith in the gods and their benign efficacy forms the starting point of all true philosophy. And the ultimate aim of all philosophy is to unify the various religions or religious cults into one single unshakable faith.²⁹⁴ Philosophizing, then, means praying; for prayer is the most effective way of securing the divine assistance necessary to philosophical wisdom and spiritual happiness.²⁹⁵ This complete identification of philosophy and religion soon also lead to an identification of science and mythology,²⁹⁶ speculation and magic.²⁹⁷ It is not altogether surprising, then,

²⁹⁰ Porphyry, *De abstin.*, 1. 31.

²⁹¹ Porphyry, in Eusebius, *Praep. Evang.*, 4. 8. 1; 14. 10. 5.

²⁹² Cf. Porphyry, *De abstin.*, 2. 61; *Ad Marcellam*, 11; 31; 16 ff.; 19; *Epist. ad Anebonem*.

²⁹³ Jamblichus, in Stobaeus, *Eclog.*, 1. 1058 ff.

²⁹⁴ Jamblichus, *Adhortatio ad philosophiam*, 4 (p. 326, edit. Kiessling).

²⁹⁵ Cf. Proclus, *In Timaeum comment.*, 64D.—Similar ideas are to be found in the writings of Julian the Apostate, who turned to philosophy because it appealed to him as a means of communicating with the gods rather than as a method of dealing with scientific problems.

²⁹⁶ Cf., for instance, Plotinus, *Ennead*, 5. 8. 6; 6. 9. 11; 3. 6. 19; 4. 4. 27; Porphyry, *De abstin.*, 2. 38 ff.; 3. 16; 4. 9; Eusebius, *Praep. Evang.*, 4. 20; 4. 23; 1. 46; Stobaeus, *Eclog.*, 1. 1026 ff.; 3. 7; Proclus, *In Timaeum comment.*, 24D; 53A; 48D; 292C; 306C; 44F; 47A; 9D; Jamblichus, in Stobaeus, *Eclog.*, 1. 888; 1. 926; 1. 1058; 1. 1060; 1. 1064; 1. 1068; Jamblichus, *Vita Pythag.*, 219; Julian the Apostate, *Orat.*, 4. 132 ff.; 4. 138; 4. 139; 4. 141; 4. 143; 4. 135; 4. 149; *Orat.*, 7. 219 ff.; Sallust, *De diis*, 4; 6.

²⁹⁷ Cf., for instance, Plotinus, *Ennead*, 4. 4. 38 4. 4. 40; 2. 9. 14; Porphyry, *De*

that some of the Neo-Platonists began to call Linus and Orpheus the first true philosophers, while others accepted the so-called Chaldaean oracles as the fountainhead of the highest philosophical wisdom.²⁹⁸ Perhaps the most valuable Neo-Platonic definition of philosophy, one which does full justice to the all-encompassing meaning of the term as it has been used by the Neo-Platonists, was coined by Ammonius: ²⁹⁹ ἰστέον οὖν ὅτι αἱ μὲν ἄλλαι ἐπιστήμαι καὶ τέχναι περί τινα μερικὰ κατὰ γίνονται, οἷον τεκτονικὴ περὶ μόνα τὰ ξύλα, ἡ ἀστρονομία περὶ μόνα τὰ οὐράνια, μόνη δὲ ἡ φιλοσοφία περὶ πάντα τὰ ὄντα κατὰ γίνεται.

To Hierocles of Alexandria,³⁰⁰ who taught Platonic philosophy at Athens around 420 A. D., philosophy meant the purification and perfection of human life. For virtue, the foremost subject of practical philosophy, purifies man, while truth, the foremost subject of theoretical philosophy, perfects life.³⁰¹ Thus it is the first task of the philosopher to distinguish between theoretical and practical reason; between theoretical truth and practical virtue. The latter purifies man by helping him to conquer the ἀλογία, the irrational or emotional appetites of the senses, while the former perfects him by divulging to him absolute truths. Thus practical philosophy makes man a good man, and theoretical philosophy turns him into a god.³⁰² The most important, the final task of all philosophy, both theoreti-

abstin., 2. 41; 2. 53; 2. 51; 2. 48; Eusebius, *Praep. Evang.*, 4. 7; 4. 8. 1; 6. 1 ff.; 6. 4. 2; St. Augustine, *De civ. Dei*, 10. 9; 10. 21; Jamblichus, *Vita Pythag.*, 90 ff.—Cf. the anonymous tract *De mysteriis*, erroneously ascribed to Jamblichus.

²⁹⁸ Cf. Proclus, *In Timaeum comment.*, 64 B ff.; Porphyry, *De abstin.*, 4. 17. Suidas mentions four books of Porphyry dealing with the "philosophy" of Julian the Chaldaean. About the so-called Chaldaean oracles, see, W. Kroll, *De oraculis Chaldaicis* (Breslau philolog. Abhandlungen 7. 1, Breslau, 1894); W. Kroll, art. Χαλδαϊκὰ λόγια, in *Pauly-Wissowa*. It should be noted here that the early Christian authors likewise referred to their religious life as philosophy.

²⁹⁹ In Ammonius, *Comment in Porphyrii quinque voces*, 2. 12 ff. The term μερικὰ signifies here specialization and scientific detail.

³⁰⁰ Cf. A. Elter, "Zu Hierocles, dem Neuplatoniker," in *Rhein. Mus.*, 65 (1910), pp. 175 ff.—Compare also Praechter's article on Hierocles in *Pauly-Wissowa*.

³⁰¹ *Comment. in aureum carmen Pythag.*, introd.

³⁰² *Ibid.*, introd. Cf. *idem.*, 20; 26.

cal and practical, is to endow us with the right insight into the workings of divine providence and into the true nature of the human soul.³⁰³

* * *

An interpretation of the meaning of philosophy which we find frequently mentioned in the "textbooks" of the philosophical schools at Alexandria, calls it "the art of all arts, and the science of all sciences"—the *τέχνη τεχνῶν καὶ ἐπιστήμη ἐπιστημῶν*. This definition, which enjoyed great popularity with the Neo-Platonists, reappears in a somewhat altered formulation also in David's *Prolegomena* to Porphyry's *Isagoge*.³⁰⁴ David styled philosophy the *μήτηρ τῶν τεχνῶν καὶ ἐπιστημῶν* . . . ἐξ αὐτῆς γὰρ τὰς ἀρχὰς καὶ αἱ τέχναι καὶ αἱ ἐπιστήμαι λαμβάνουσιν. This interpretation of philosophy also shows clearly that by this time philosophy is no longer identified with religion, ethics, or theology. It is primarily concerned with the overall scientific significance of the term and the pre-eminent position it holds among all other intellectual endeavors, rather than with some particular or detailed meaning.³⁰⁵ The same distinct trend away from specialization can also be noted in Philo of Alexandria when he stated that οὐδὲ τοῦτό τις ἀγνοεῖ ὅτι πάσαις ταῖς κατὰ μέρος τὰς ἀρχὰς καὶ τὰ σπέρματα ἐξ ὧν ἀναβλαστεῖν ἔδοξε τὰ θεωρήματα, φιλοσοφία δεδῶρται.³⁰⁶

The definition which sees in philosophy the *τέχνη τεχνῶν καὶ ἐπιστήμη ἐπιστημῶν* has a rather interesting history. Ammonius informs us that "there is also another definition of philosophy devised by Aristotle, a definition, that is to say, which stems from the pre-eminence which philosophy holds as regards the

³⁰³ *Ibid.*, introd.

³⁰⁴ Cf. *Davidis proleg. et in Porphyry. Isag. comment.*, 2. 12 ff. (in *Comment. in Arist. Graec.*, 18. 2); Cicero, *De fin.*, 2. 21. *Tuscul.*, 1. 26. 64. Compare notes 85, 176, and 141, *supra*.

³⁰⁵ Cf. the definition in Ammonius, *Comment in Porphyrii quinque voces*, 2. 12 ff. See also notes 299 and 304, *supra*.

³⁰⁶ *De congressu eruditionis gratia*, 21. 146 (in vol. 3, p. 102, 15, edit. Cohn-Wendland). Obviously the term *μέρος* refers to the special sciences and scientific detail. Cf. David, *Proleg.*, 40. 13 ff.; *Comment. in Porphyrii quinque voces*, 2. 12 ff.

other arts and sciences.”³⁰⁷ Elias, the famous commentator on Aristotle³⁰⁸ and the disciple of Ammonius and Olympiodorus, insisted that “the fifth definition of philosophy according to Aristotle . . . [was] that of τέχνη τεχνῶν καὶ ἐπιστήμη ἐπιστημῶν. For in the *Metaphysics* (the μετὰ τὰ φυσικὰ πραγματεία), also called *Theology*,³⁰⁹ he [scil., Aristotle] defines it as such on account of its pre-eminence.”³¹⁰ Thus it might be assumed that this definition was actually contained in some known edition of Aristotle’s *Metaphysics*,³¹¹ a fact which might be gathered also from a remark by Elias himself to the effect that “some are in doubt that philosophy, being the art of all arts, can itself be an art. And we say that as the art of all arts, philosophy must be above and beyond art, or rather that philosophy, which instructs all other arts, should be called the art of all arts.”³¹² And a few pages prior to this statement, Elias, referring to the definition of philosophy as the τέχνη τεχνῶν, makes the following significant remark: διὸ καὶ ἀποροῦσιν ὅτι, διὰ τι τοιούτῳ ἐπαναδιπλασιασμῷ κέχρηται.³¹³ Assuming, then, that the definition of philosophy as the τέχνη τεχνῶν καὶ ἐπιστήμη ἐπιστημῶν actually was to be found in the original writings of Aristotle, we might surmise that it stood in *Metaphysics*, book 1, chap. 2, possibly right after 982 b 7,³¹⁴ on account of the preceding ἀρχικωτάτη (“sovereign” or “authoritative”). This chapter has frequently been used by the Aristotelian scholiasts or commentators to explain and confirm the pre-eminence (ὑπεροχή) of philosophy.

³⁰⁷ In Porphyry, *Isagoge*, 6.25. Cf. Ammonius, *Comment. in Porphyrii quinque voces*, 2.12 ff. (in *Comment. in Arist. Graec.*, 4.3).

³⁰⁸ In *Comment. in Arist. Graec.*, 18.1.

³⁰⁹ Cf., in general, Asclepius, *Comment. in Arist. Metaphys.*, 74.5; *ibid.* at 8.11; 8.18 (in *Comment. in Arist. Graec.*, 6.2).

³¹⁰ Elias, *Comment. in Porphyrii Isagogen*, 20 (in *Comment. in Arist. Graec.*, 18.1). Cf. Asclepius, *loc. cit.*

³¹¹ Cf. A.-H. Chroust, *loc. cit.*, 56.

³¹² *Comment. in Porphyrii Isagogen*, 23.10.

³¹³ *Ibid.*, 20.22.

³¹⁴ The whole passage in Aristotle, *Metaphys.*, 982 b 4, reads as follows: “And the science which knows to what end each thing must be done, is the most

While Elias based the definition of philosophy as the τέχνη τεχνῶν καὶ ἐπιστήμη ἐπιστημῶν definitely on the authority of Aristotle, Ammonius³¹⁵ and some of his disciples,³¹⁶ among them Asclepius³¹⁷ and Eustratius,³¹⁸ treated this definition as something commonly known and universally accepted. Thus Isidore of Pelusium, who may have made use of the *Commentary* of Elias or some other disciple of Ammonius, simply stated that "other philosophers are of the opinion that philosophy is the art of all arts, and the science of all sciences. . . ." ³¹⁹ We have already pointed out ³²⁰ that, in compliance with the supposedly orthodox Aristotelian tradition revived at Alexandria, the Neo-Platonist David called philosophy "the mother of all the arts and sciences through which we might gain true understanding not only of the first principles, but also of all the special or detailed arts and sciences."³²¹ This statement, which declares that philosophy is the matrix of all the arts and sciences, actually goes back to Posidonius³²² rather than Aristotle, although when formulating this definition Posidonius might have been under the influence of Aristotle. On the other hand, the statement of Philo of Alexandria, that it is impossible to discover within the various special sciences such a first principle, and that only philosophy could tell us anything about the latter,³²³ is definitely Aristotelian, as is the remark, made by Ammonius, that "philosophy, as the science

authoritative or sovereign of the sciences, and more authoritative or sovereign than any ancillary science."

³¹⁵ *Comment. in Analyt. prior.*, 1.10.8 (in *Comment. in Arist. Graec.* 4.6).

³¹⁶ Simplicius, *Comment. in Arist. phys.*, 1.47.30 (in *Comment. in Arist. Graec.*, 9).

³¹⁷ Asclepius, *Comment. in Arist. Metaphys.*, 74.5 (in *Comment. in Arist. Graec.*, 6.2).

³¹⁸ Eustratius, *Comment. in Arist. ethic.*, 322.12 (in *Comment. in Arist. Graec.*, 20).

³¹⁹ In *Patrol. Graec.*, 78. col. 1637.

³²⁰ Cf. note 304, *supra*.

³²¹ Davadis *proleg. et in Porphyrr. Isag. comment.*, 2, 12 ff. (in *Comment. in Arist. Graec.*, 18.2).

³²² Seneca, *Epist.*, 88.24; 88.21; 90.7; 90.23. Cf. also Cicero, *De orat.*, 2.46.194.

³²³ *De congressu erud. gratia*, 26.146 (in vol. 3, p. 102, 15, edit. Cohn-Wendland).

of all sciences, alone is about everything that is or exists."³²⁴ Thus Ammonius in fact only restated that, in accordance with Aristotle's definition of the *πρώτη φιλοσοφία*,³²⁵ philosophy constitutes the *γνώσις τῶν ὄντων ἢ ὄντα*.³²⁶

* * *

The many "introductions"—*prolegomena* or *isagogai*—to philosophy compiled during the fourth, fifth, and sixth centuries at Alexandria and elsewhere and used by the "universities" to acquaint the novice with the basic problems of philosophy, on the whole contain six major definitions of the meaning of philosophy. All these definitions were looked upon as being authoritative, despite the fact that in many respects they must be considered as being partially contradictory and, hence, mutually exclusive.³²⁷ According to these "textbooks," philosophy is first of all the *γνώσις τῶν ὄντων ἢ ὄντα*—the "science" of being *qua* being. This definition, which was ascribed curiously enough to Pythagoras,³²⁸ is in effect nothing other than a restatement of Aristotle and as such is primarily concerned with and derived from the *object* of philosophy—*ἀπὸ τοῦ ὑποκειμένου*. The second definition is that of the *ὁμοίωσις θεῷ κατὰ τὸ δυνατόν*—the becoming like God as far as this is possible. This definition, which is frequently used, is concerned with the *end* of philosophy (*ἐκ τοῦ τέλους*), and actually goes back to Plato's *Theaetetus*,³²⁹ *Phaedo*,³³⁰ and *Republic*.³³¹ The

³²⁴ In Ammonius, *Comment. in Porphyrii quinque voces*, 2. 12 ff.

³²⁵ Cf. *Metaphysics*, 1026 a 24; 1026 a 30; 1061 b 19. A.-H. Chroust, *op. cit.*, 39.

³²⁶ In Ammonius, *Comment. in Porphyrii quinque voces*, 2. 12 ff.

³²⁷ Cf. for instance, Ammonius, *Comment. in Porphyrii quinque voces*, 1 ff. (in *Comment. in Arist. Graec.*, 4. 3); David, *Proleg. et in Porphyr. Isag. comment.*, 20. 25 (in *Comment. in Arist. Graec.*, 18. 2); Elias, *Comment. in Porphyr. Isag.*, 7, 26 ff. (in *Comment. in Arist. Graec.*, 18. 1); Asclepius, *Comment. in Arist. Metaphys.*, 1. 18 (in *Comment. in Arist. Graec.*, 6. 2); Eustratius, *Comment. in Arist. ethic.*, 322. 12 (in *Comment. in Arist. Graec.*, 20). Cf. Julian the Apostate, *Orat.*, 6 (p. 237, edit. Hertlein).

³²⁸ Cicero, *Tuscul.*, 5. 3. 9, attributes to Pythagoras the statement that philosophy consists in scanning closely the essential nature of things.

³²⁹ *Theaetetus*, 176 B. Eudorus of Alexandria claims, however, that this definition actually goes back to Pythagoras and Socrates. Cf. Stobaeus, *Eclog.*, 2. 49. 8 ff. It might be interesting to note here that the definition of philosophy as the

third definition, which also deals with the *end* of philosophy, informs us that the latter signifies the γνώσις θεῶν καὶ ἀνθρωπίνων πραγμάτων—the knowledge and understanding (or science) of things both divine and human. Although this definition is obviously Stoic in origin,³³² for some rather curious reason it was credited to Pythagoras,³³³ probably on account of the nearly mystic reverence this ancient sage enjoyed during the first centuries after Christ.³³⁴ The fourth definition, which calls philosophy a μελέτη τοῦ θανάτου—a meditation or discourse about death—is definitely Platonic³³⁵ and is concerned with the *end* of philosophy. The fifth definition which tells us that philosophy is the φιλία τῆς σοφίας—the love and pursuit of wisdom—is likewise Platonic or perhaps Socratic.³³⁶ This last definition, which attempts to explain the meaning of philosophy by resorting to the etymology of the term, has also been ascribed to Pythagoras, probably owing to the influence of Jamblichus,³³⁷ Hermias,³³⁸ and Cicero.³³⁹ The sixth definition

ὁμολοῖσι θεῷ, which seems to go back to Plato (*Theaetetus* 176 B), can already be detected in the writings of Antisthenes. Cf. Diog. Laert. 6.105: "The wise man is . . . a friend of his like (φίλον τῷ ὁμοίῳ)." *Ibid.* 6.72: "The gods are friends of the wise." *Ibid.* 6.37: "The wise are friends of the gods. . . ." *Ibid.* 6.51: "Good men [are] images of the gods (θεῶν εἰκόνας)."

³³⁰ *Phaedo*, 62B; 66B; 67A.

³³¹ *Republ.*, 613AB; 500C.

³³² Cf. H. Diels, *Doxogr. Graec.*, 273; 602; H. V. Arnim, *Stoic. vet. frag.*, II. nos. 35; 36.

³³³ Elias does this in his *Comment. in Porphyrii Isagogen*, 11.

³³⁴ Cf. Jamblichus, *Vita Pythag.*, 58 ff.

³³⁵ *Phaedo*, 67C; 61B; 64E ff.; *Republ.*, 486A.

³³⁶ Cf. *Republ.*, 480A; 485B; 475B; 502C; 376B; 475E; 484D; 582D; 490A; *Phaedrus*, 249B; *Sophist*, 268D; *Theaet.*, 176B; *Sympos.*, 203D ff.; *Phaedo*, 61A; *Gorgias*, 484C; *Euthydemus*, 268A ff. — Seneca, in *Epist.*, 89.4, stated that philosophy merely points out what true wisdom has already achieved.

³³⁷ *Vita Pythag.*, 58 ff.

³³⁸ *Comment. in Plat. Phaedrum*, 264.10 ff.

³³⁹ *Tuscul.*, 4.3; 4.4. According to Cicero, Pythagoras is said to have called himself a philosopher, that is, a lover of wisdom, rather than a σοφός—a sage who already possesses wisdom, because wisdom, according to Pythagoras, belongs to God alone. Hence he did not wish to be called a wise man, but simply a lover or friend of wisdom. Cf. Plato, *Phaedrus*, 278 D: "... wise ... is a great name which belongs to God alone." *Sympos.*, 203 D: "... no god is a philosopher or seeker after wisdom, for he is wise already; nor does a man who is

sees in philosophy the *τέχνη τεχνῶν καὶ ἐπιστήμη ἐπιστημῶν*, a definition which proceeds from the exalted position (*ἐκ τῆς ὑπεροχῆς*) which philosophy holds among all intellectual and intelligent pursuits. This last definition has been ascribed to Aristotle,³⁴⁰ and has been used extensively by Ammonius and his disciples.³⁴¹

These six definitions of philosophy had already become what might be called authoritative canons long before they were finally restated by the School of Alexandria. The preëminently mystical character of Plato's *ὁμοίωσις θεῷ κατὰ τὸ δυνατόν*³⁴² undoubtedly appealed to the Neo-Platonists, and to Plotinus in particular, who took over this Platonic statement by identifying *φύγη* with the *ὁμοίωσις θεῷ*.³⁴³ But even before Plotinus this definition of philosophy as the *ὁμοίωσις θεῷ* had been used by early Christian thinkers. As a matter of fact, we find traces of this definition not only in St. Paul³⁴⁴ and in the Gospel according to St. Matthew,³⁴⁵ but also in Tatian,³⁴⁶ Melito of Sardes,³⁴⁷ Justin Martyr,³⁴⁸ and Clement of Alexandria.³⁴⁹

wise seek after wisdom." *Lysis*, 218 A: "Those who are already wise . . . are no longer philosophers. . . ."

³⁴⁰ Cf. notes 307-314, *supra*, and the corresponding text.

³⁴¹ Cf. notes 304-326, *supra*, and the corresponding text.

³⁴² *Theaet.*, 176 B. Ammonius, in *Comment. in Porphyrii quinque voces*, 3.8 (in *Comment. in Arist. Graec.*, 4.3); David, in *Proleg.* (edit. Brandis, *scholia* 13 a 45); and Elias, in *Comment. in Porphyrii Isagogen*, 16.10 (in *Comment. in Arist. Graec.*, 18.2), changed the original Platonic texts into ". . . as far as this is possible for a human being"—*κατὰ τὸ δυνατόν ἀνθρώπῳ*. Cf. also the various interpretations of this famous Platonic passage in Themistius (*Orationes*, edit. Dindorf, 2.32); Plutarch (*De sera numinis vindicta*, 15; 24, edit. Wyttienbach); and Julian the Apostate (*Orat.*, 6, p. 184, edit. Lips).

³⁴³ *Ennead*, 2.2.1.

³⁴⁴ *Romans*, 8.29: ". . . to be conformed to the image of the Son. . . ." Cf. *ibid.*, 6.5; *Ephes.*, 4.24.

³⁴⁵ *Matthew*, 5.48: "Be ye therefore perfect, even as your father who is in heaven is perfect."

³⁴⁶ *Orat.*, 31.

³⁴⁷ In Eusebius, *Hist. Eccl.*, 4.26.

³⁴⁸ Frag. 18.—Cf. J. Pfäffisch, "Der Einfluss Platons auf die Theologie Justins des Martyrs," in *Forschungen zur christlichen Literatur-und Dogmengeschichte* (1910).

³⁴⁹ *Paedagogus*, 3.311 (edit. Stählin, vol. 1); *Protrepticus*, 76 ff.; *Stromata*, 2.26 (edit. Stählin, vol. 2). Cf. Eusebius, *Praep. Evang.*, 13.672.

Plato's other definition of philosophy as the *μελέτη θανάτου*, or the *λύσις καὶ χωρισμὸς τῆς ψυχῆς ἀπὸ σώματος*,³⁵⁰ was most readily accepted by the Stoics, who used it in order to justify their views on suicide (*ἐξαγωγή*).³⁵¹ Thus Seneca stated: "*Egregia res est mortem condiscere . . . hoc est ipsum quare meditari debeamus.*"³⁵² But it was Cicero who really introduced this definition into the Latin world when he insisted that "*tota enim philosophorum vita, ut ait idem [scil., Socrates], commentatio mortis est.*"³⁵³ And a little later the same writer insisted once more that "*secernere autem a corpore animum ecquid aliud est quam mori discere?*"³⁵⁴ Apuleius likewise called philosophy the "*mortis affectum consuetudinemque moriendi.*"³⁵⁵ It is not altogether surprising, therefore, that this particular definition, which could only appeal to the early Christians, should find its way into the writings of St. Jerome,³⁵⁶ St. John of Damascus,³⁵⁷ and St. Augustine.³⁵⁸ It was, however, Cassiodorus³⁵⁹ who more than anyone else con-

³⁵⁰ *Phaedo*, 64A; 67B.

³⁵¹ Cf. Seneca, *Epist.*, 12.10; 12.25; 70.11; 70.14; 65.22; 117.21 ff.; 120.14 ff.; Marcus Aurelius, *Thoughts*, 5.29; 8.47; 10.8; 10.32; 3.1; Epictetus, *Discours*, 1.24.20; 3.24.95 ff.; Seneca, *De providentia*, 6.6. Cf. Elias, *Comment. in Porphyrii Isagogen*, 14 (*Comment. in Arist. Graec.*, 18.1).

³⁵² Seneca, *Epist.*, 25.

³⁵³ *Tuscul.*, 1.30.

³⁵⁴ *Tuscul.*, 1.31.

³⁵⁵ *De Platone et eius dogmate*, 277.

³⁵⁶ *Epist.*, 127, *Ad Principiam virginem sive Marcellae viduae epitaphium*, 6 (in *Patrol. Lat.*, 22, col. 1091): ". . . illud Platicum, qui philosophiam meditationem mortis esse dixit."

³⁵⁷ *Περὶ γνώσεως*, 6; 68. It should be remembered that the *Περὶ γνώσεως*, among others, is under the influence of Porphyry and Ammonius.

³⁵⁸ *Epist.*, 155.

³⁵⁹ *De artibus ac disciplinis liberal. litterarum*, 3 (in *Patrol. Lat.*, 70, col. 1167). Cassiodorus knew only four of the basic definitions of philosophy proposed by Ammonius, Elias, and David, namely the "divinarum humanarumque rerum in quanta est possibilis scientia"; the "ars artium et disciplina disciplinarum"; the "meditatio mortis"; and the "[assimilatio] Deo secundum quod possibile est homini." The insertion of the word "homini" (*κατὰ τὸ δυνατόν ἀνθρώπῳ*) is not to be found in Plato, but must be considered a later addition made by Ammonius, Elias, and David. Cf. note 342, *supra*. Boëthius mentions only one definition of philosophy, namely the "amor et studium et amicitia quodammodo sapientiae," a definition which is probably taken from Cicero. *Patrol. Lat.*, 64, col.

tributed to the propagation of this particular definition of philosophy during the early part of the Middle Ages. Isidore of Seville,³⁶⁰ again, quoted five basic definitions of philosophy by calling it the "*rerum humanarum divinarumque cognitio cum studio bene vivendi coniuncta*";³⁶¹ the "*amor sapientiae*"; the "*divinarum humanarumque rerum in quantum homini possibile est probabilis scientia*";³⁶² the "*ars artium et disciplina disciplinarum*"; and the "*meditatio mortis*."³⁶³

The six basic or "canonical" definitions of philosophy as they have been listed by the School of Alexandria return with the regularity of stereotypes in the works of the late Hellenistic-Roman writers and scholiasts. Probably the first author to enumerate all these six definitions is Ammonius, who was scholarch at Alexandria during the fifth century after Christ. As such he had a great and lasting influence not only on the Neo-Platonists of the sixth century—Damascius, Simplicius, Olympiodorus, Joannes Philoponus, Asclepius, and Theodotus—but also on Byzantine, Syrian, and Arabic writers. In his *Com-*

10. Isidore of Seville, in *Etymol.*, 2.23.2, quoting Cassiodorus, remarks that "consuetudo itaque est doctoribus philosophiae antequam ad Isagogen veniant exponendam divisionem philosophiae paucis attingere." This remark proves that Cassiodorus was familiar with some of the Alexandrian *prolegomena philosophiae*. In addition, Cassiodorus also quotes a definition which is typical for Ammonius and his disciples, namely the *ὁμολογίς θέω κατὰ τὸ δυνατόν ἀνθρώπων*. It has already been pointed out that the addition of the word *ἀνθρώπων* goes back to Ammonius.

³⁶⁰ *Etymol.*, 2.24.1; 2.24.2; 2.24.9.

³⁶¹ Obviously this definition is a combination of elements borrowed from the Early Stoics, Cicero, and Seneca.—The definition of philosophy as the "*rerum humanarum divinarumque cognitio cum studio bene vivendi coniuncta*," can also be found in Dominicus Gundissalinus, *De divisione philosophiae* (edit. Baur), in *Beiträge zur Gesch. d. Philos. d. Mittelalters*, 4.7, lines 13-14. Gundissalinus probably found this definition in the *Etymol.*, 2.24.1, of Isidore of Seville, or perhaps in the *De definitionibus* of Isaak ben Salomon Israeli in the translation of Gerhard of Cremona.

³⁶² This definition is plainly a combination of Stoic and Platonic elements.

³⁶³ Through the influence of Isidore of Seville and perhaps that of Cassiodorus (*Patrol. Lat.*, 70 col. 1167), these definitions, or at least some of them, were transmitted to Alcuin, the Venerable Bede, Hugh of St. Victor, St. Bernard of Clairvaux (*De diligendo Deo*, 11.3, in *Patrol. Lat.*, 182. col. 994; cf. *ibid.*, 15.39, in *Patrol. Lat.*, 182. col. 998), and many others.

mentary to Porphyry's *Isagoge*³⁶⁴ he authoritatively stated these six definitions, which from then on were accepted by nearly all the later scholars and scholiasts without challenge.³⁶⁵

According to Ammonius these six basic definitions fall into three major groups, namely as regards their *ὑποκείμενον* (their object), their *τέλος* (their purpose or end), and their *συναμφοτέρον* (their "complex meaning"). Although Ammonius also mentioned several other definitions of philosophy, he did not include them among his basic definitions. This fact might indicate that he merely made a selection from an already existing collection of philosophical definitions.³⁶⁶ Ammonius' six basic *ὁρισμοὶ* (definitions) *τῆς φιλοσοφίας* reappear in the *Prolegomena* of Elias. It is quite possible that Elias is here under the influence of a lost *Isagoge* of Olympiodorus³⁶⁷ (who was the disciple of Ammonius and the teacher of Elias). Like Ammonius, Elias derived his six fundamental definitions of philosophy³⁶⁸ analytically (*ἀναλυτικῶς*) *ἐκ τοῦ ὑποκειμένου*; *ἐκ τοῦ τέλους*; and *ἐκ τῆς ὑπεροχῆς τῆς φιλοσοφίας*. He differs from Ammonius, however, in that he not only added another "category" from which he derived the meaning of philosophy, namely *ἐκ τῆς ἐτυμολογίας*, but also in that he attempted definitively to assign the authorship of these six basic definitions to various philosophers. Thus he claimed for Pythagoras no

³⁶⁴ Ammonius, *Comment. in Porphyrii Quinque Voces*, 1 (in *Comment. in Arist. Graec.*, 4.3).

³⁶⁵ Cf. for instance, A.-H. Chroust, "The Definitions of Philosophy in the *De divisione philosophiae* of Dominicus Gundissalinus," *The New Scholast.*, 25, no. 3 (1951), 253-281.

³⁶⁶ Cf. Ammonius and the remark prefacing his definitions of philosophy, in *Comment. in Porphyrii Quinque Voces*, 2, line 16: *Παραλαμβάνονται οὖν τῆς φιλοσοφίας ὁρισμοὶ πολλοί· πολλοὶ γὰρ πολλαχῶς ὤρσαντο τῶν παλαιότερων αὐτήν.*

³⁶⁷ David, in *Proleg.* (edit. Brandis, *scholia* 14 b 33), actually quotes Olympiodorus.

³⁶⁸ Elias strictly adhered to these six basic definitions of philosophy, which number he also defended by ascribing to it certain magic qualities. *Proleg.*, 7; 24 (in *Comment. in Arist. Graec.*, 18.2). Cf. Porphyry, *Vita Plot.* (edit. Kirchhoff), p. XXXIX; chap. 24; Theon of Smyrna, *Expositio rerum mathematicarum ad legendum Platonem utilium* (edit. Hiller), 45.

less than three definitions: the *φιλία τῆς σοφίας*,³⁶⁹ the *γνώσις τῶν ὄντων ἢ ὄντα*, and the *γνώσις τῶν θείων καὶ ἀνθρωπίνων πραγμάτων*—in short, all those definitions which follow *ἐκ τῆς ἐτυμολογίας* and *ἐκ τοῦ ὑποκειμένου τῆς φιλοσοφίας*. To Plato he assigned two definitions: the *μελέτη θανάτου* and the *ὁμοίωσις θεῷ κατὰ τὸ δυνατὸν (ἀνθρώπῳ)*—in other words, those definitions which are derived *ἐκ τοῦ τέλους τῆς φιλοσοφίας*. And finally he credited Aristotle with that definition which calls philosophy the *τέχνη τεχνῶν καὶ ἐπιστήμη ἐπιστημῶν*, a definition which follows *ἐκ τῆς ὑπεροχῆς τῆς φιλοσοφίας*. On the other hand, Elias rejects that definition which sees in philosophy an *ιατρικὴ ψυχῶν* (healer of souls).³⁷⁰ The same definitions as well as the same reasons for proposing them are also to be found in the *Prolegomena* of David,³⁷¹ who undoubtedly is here under the direct influence of Elias.

In the schools of Plato and Aristotle the term philosophy acquired the meaning of a methodical study or inquiry concentrating on the particular and detailed sciences in which the individual provinces of knowledge were to be investigated. Parallel to this trend in the direction of scientific detail and departmentalization, the problem of man's practical vocation gained ever greater importance for all philosophical discussions. Scientific instruction in the right conduct of life became the essential task and, in some instances, the sole content of philosophy. In this manner philosophy acquired the practical meaning of an art of life or that of a study of human character. These efforts to derive from scientific principles and rational

³⁶⁹ The etymological definition of philosophy has frequently been credited to Pythagoras. Cf. Diog. Laert., proem, 12; 8. 8; Cicero, *Tuscul.*, *disp.*, 4. 3 ff.; 5. 9; Jamblichus, *Vita. Pythag.*, 58 ff.; Hermias, *Comment. in Plat. Phaedr.*, 264, line 10 ff. Since, however, the rather unreliable *Περὶ νόσων* of Heraclitus of Pontus seems to be the source of all this information, we should not put too much faith in it.

³⁷⁰ This definition was very popular with the Cynics and the Late Stoics. Cf. note 114, *supra*.

³⁷¹ Edit. Brandis, *scholia* 12 a-16 b.—It may be assumed, therefore, that both Elias and David, through the medium of the *Prolegomena* of Olympiodorus which have not yet been discovered, had taken over these definitions of philosophy originally proposed by Ammonius.

insights a moral conviction for the direction of life finally culminated in an attempt to create a new religion or religious metaphysics that would bring solace, comfort, and salvation to man. At the same time the commentators and scholiasts, primarily for didactic reasons, attempted to restate and simplify in their "Introductions to Philosophy" the basic definitions of philosophy as they had been developed by Greek philosophers. It was in this form that the Middle Ages, often through the medium of Syrian and Arabic scholars, inherited many of its definitions of philosophy.

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BOOK REVIEWS

The Wisdom of Faith. By CHARLES JOURNET. (tr. by R. F. Smith, S. J.)
Westminster: Newman, 1952. Pp. 241. \$4.25.

Sacra Doctrina. By GERALD F. VAN ACKEREN, S. J. Rome: Catholic Book Agency, 1952. Pp. 135 with index.

The question of the nature and functions of Sacred Theology is one that has evoked considerable interest in recent times, and within the past few years these two works, among others, have appeared treating of different aspects of the subject.

Msgr. Journet indicates that the principal purpose of his book, as the title suggests, is to explain and elaborate the idea of "the wisdom of faith," which he takes to be identical with Christian doctrine or theology.

The first portion of his work—after a preliminary chapter on "The Wisdom of Love," which is a discussion of the wisdom which is the infused gift of the Holy Ghost—is devoted to what he calls "doctrinal," as distinguished from "historical," theology. Here he develops an important idea when he speaks of "ambivalent propositions" (Chapter 2) for he points out that the terms which are predicated of God, such as "one," "good," "wise," are analogous not only as they are terms applied to God and creatures, but also as they are used in natural theology or theodicy and in supernatural theology; for as they are terms used by God to make known to us something of the Divine Essence Itself, they have a meaning simply diverse from that which is attained even in the metaphysics of Uncreated Being.

When he begins to discuss more in detail the precise character of doctrinal theology, Msgr. Journet puts the emphasis strongly upon what can be called the "organizational" function of theology. This is for him its principal role, for while insisting that "that which specifies theology and makes it distinct from faith and from natural disciplines is . . . the discursive procedure of reason under the illumination of faith and from the data of faith . . .," he immediately adds: "This discursive procedure can begin with one truth of faith . . . and conclude to another truth of faith. In such a case, the procedure of theology permits us to organize the truths of faith." (p. 43) He quotes with approval a passage from Jacques Maritain wherein this function of theology is called "principal," and theology is said to include "chiefly, the very truths of faith, which are penetrated and connected one to another with the aid of human inference."

He makes correspondingly little of the other role of theology, the deducing of new truths from revealed principles, which he calls "the extension of the revealable." To pass so lightly over this function of theology is, of course, to avoid an area filled with problems; to omit, for example, any discussion of the nature of theological conclusions or of the way in which one truth can be contained in another. Perhaps Msgr. Journet had no desire to enter into this field, but the omission of some treatment of it can only be considered as a rather serious defect in a work that professes to give a comprehensive introduction to the nature of theological science.

In the second portion of his book Msgr. Journet considers "historical theology." Here again he has recourse to the organizing character of theology; for whereas he has indicated that the function of doctrinal theology is to discover the internal order of what has been revealed, he makes it the purpose of historical theology to discover the successive order found in the dispensation and unfolding in time of what has been revealed.

Here the author makes a distinction between the discipline which is concerned with the historical examination of the sources of theological knowledge on the one hand, and what he terms historical theology on the other. To this former discipline, which he notes is generally called theology, he would not accord the name theology in the full sense. "Rather it appears . . . to be but an initial movement, a fundamental phase of doctrinal theology—the phase of topological exposition." (p. 66)

The term historical theology he would accord only to a discipline which he concedes "has not yet been founded; nor," he adds, "is it so easy to conceive its nature with great preciseness." (p. 90) He would assign to it the task of offering "an ultimate explanation of the historical order to be found in the revealable by theological reason, that is, by reason operating in the light of faith and concerning the data of faith." (p. 91) It is, because of its superior light, distinct from and higher than either historical or exegetical science. It "applies itself to the discovery of the succession according to which the history of salvation has been conducted." (p. 101) It has "recourse to documents insofar as they manifest a providential content." (p. 119).

We must agree with Msgr. Journet, however, that even after this explanation it is not "easy to conceive its nature with great preciseness"; and it is rather difficult to see just how this kind of theological "second-guessing" about the operations of Divine Providence in history can ever be developed into a science. Nor do the "Themes of Historical Theology" suggested by Msgr. Journet in his seventh chapter help much in an understanding of how this new science is to proceed.

Father Van Ackeren's book is considerable more limited in its scope, being simply an attempt to discover the meaning of the phrase *sacra doctrina* as it appears in the first question of the *Summa*. Its approach is also much less rhetorical and more academic, which is quite understand-

able when we note that the work was presented to the faculty of theology at the Gregorian University as a thesis for the doctorate.

After outlining the interpretations that have been given to the phrase by the classical Thomistic commentators and by certain prominent contemporary Thomists, Father Van Ackeren seeks to discover the meaning of the term *doctrina* in the various works of St. Thomas, and comes to the conclusion that *doctrina* meant for St. Thomas primarily the action or activity whereby a teacher makes something known to a disciple. In applying this idea to the first question of the *Summa* the author strives to show that the term has a single meaning throughout the whole first question: it is "an action, the instruction of men in the knowledge of salvation . . ." It is "not to be identified with Sacred Scripture, nor is it to be identified with the habit of sacred theology. It is doctrine in the formal sense of the term: i. e. the generation of knowledge." (p. 118)

Father Van Ackeren is to be congratulated upon his contribution to a solution of the problem of the meaning of this phrase in St. Thomas. It has the advantage of supplying a single meaning which can be applied to all the articles of the first question of the *Summa*, and the meaning given to the term *doctrina* certainly seems well borne out by the references to St. Thomas' use of this word elsewhere. The author furthermore furnishes some interesting and original suggestions on the relations which Scripture and theology will have to this divine teaching activity.

One might note, as indeed Father Van Ackeren does, that his suggested solution is not too far distant from that suggested by Père Congar in his article "Théologie" in the *Dictionnaire de théologie catholique*, wherein the basic idea of doctrine as instruction in the active sense is developed; though Father Van Ackeren makes further distinctions and refinements, especially regarding the precise relation of this sacred doctrine to Sacred Scripture and theology.

A final word might be said about the format of the two books. Msgr. Journet's work, published in this country, is well printed and bound, but perhaps in the very interests of a pleasing typographical format, all notes are relegated to the back of the book, a practice that can only cause annoyance to the scholarly reader—and no one else is likely to be reading this work. There is, furthermore, no index.

Father Van Ackeren's work, published in Rome, is in paper wrappers and printed on paper of newsprint quality. The text, however, is relatively free of typographical errors—something of an accomplishment, for the continental printer usually takes a few liberties with the English language. The footnotes are where they belong, at the foot of the pages, and there is a good index.

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Medieval Logic: An Outline of Its Development from 1250 to ca. 1400.

By PHILOTHEUS BOEHNER, O.F.M. Chicago: University of Chicago Press, 1952. Pp. 148. \$3.00.

De Puritate Artis Logicae. By WALTER BURLEIGH. Edited by Philotheus

Boehner, O.F.M. St. Bonaventure: The Franciscan Institute and Louvain: E. Nauwelaerts, 1951. Pp. 131. \$1.50.

The first work is a booklet designed to promote harmony and understanding between scholastic and modern logicians. It is the author's contention that many modern scholastics do not have a genuinely scholastic logic since they do not consider logic as an essentially formal science. And the reason for this is that they are not acquainted with their own tradition, namely, genuine scholastic logic of the 13th, 14th and 15th centuries wherein there is found a logic containing many elements of a strictly formal logic, so much so, that these elements appear to be definite anticipations, if not the exact doctrines, of modern logic. Avoiding the vague phrases, "traditional logic" and "classical logic," Fr. Boehner indicates precisely what he means by "neo-scholastic logic," "Aristotelian logic" and "modern logic," before stating and substantiating his conclusions. This is done in the Introduction. The body of the work is divided into three parts; Part One: Elements of Scholastic Logic; Part Two: Important Contributions of Scholastic Logic; and Part Three: Systems of Scholastic Logic. Part One is divided into two chapters: I, The Legacy of Scholastic Logic, and II, New Elements of Scholastic Logic. For the legacy of scholastic logic he has chosen Albert the Great's logical works as his source. There are eleven works cited, paraphrases on the six works of the *Organon* plus paraphrases on Boethius's works on division, categorical syllogisms, and hypothetical syllogisms. The other two works are Albert's treatment of the material found in Porphyry's *Isagoge* and Gilbert de la Porée's *Six Principles*. These works are merely listed and summarily described with regard to their contents. The new elements which Fr. Boehner lists in chapter two are the small tracts added by later scholastics which he divides into five groups: 1. *De Syncategorematicis*, 2. *De proprietatibus terminorum*, 3. *De insolubili*, 4. *De obligatione*, 5. *De consequentiis*.

Part Two contains three chapters: I, The Syncategoremata As Logical Constants; II, The Theory of Supposition; and III, The Theory of Consequences. In the first chapter Fr. Boehner indicates clearly the distinction between categorematic and syncategorematic words and the significative and suppositional dependence of the latter upon the former. He sees in this distinction a definite parallelism with the modern distinction between the constants and variables of logical discourse. A splendid quotation from Albert of Saxony shows that the latter considered the *syncategoremata* as formal elements which do not change. This is another indication of the

formalized character of medieval logic. In the second chapter Fr. Boehner briefly schematizes the theories of Peter of Spain, William Ockham, and Walter Burleigh on supposition. He likens the theory of supposition to the modern functional calculus. In chapter three the author treats of the notion and division of consequences according to William Ockham and Albert of Saxony. He also gives a brief survey of the consequential rules found in Ockham which have corresponding theorems of the propositional calculus. He gives the rule in translation, followed by the Latin text; then he explains and gives an instance of the rule; finally, he places it in symbolization.

Part Three contains only one chapter in which the author merely indicates the content of five medieval logicians' works by schematizing a division of their most important logical opus. The five logicians summarized in this manner are Peter of Spain, William Ockham, John Buridan, Walter Burleigh, and Albert of Saxony. Two appendices contain a few *sophismata* of Albert of Saxony as well as a major portion of his rules of supposition.

The second work is believed to be the first edited text of the shorter of two texts bearing the name *De Puritate Artis Logicae*. It contains Burleigh's treatment of the general rules of consequences and a much longer discussion (eighty per cent of the text) on the *syncategoremata*. The publication of this text stems from the author's belief that Burleigh marks a milestone in the history of logic, since he, above all scholastics, fully understood the importance of emphasizing the essential formalism of logic. This is clear from the importance which Walter attaches to the theory of consequences, an importance so great, that syllogistics was swallowed up by it as a subordinate part. Walter scarcely mentions syllogistics, while the theory of consequences is the first topic discussed in his work.

The more valuable book is the Burleigh text. Fr. Boehner has produced a very modern and readable edition of a work which, if his estimate of Burleigh be correct, is indispensable towards the construction of a complete history of medieval logic. This latter *desideratum* is only possible if the medieval texts are made available to scholars who can reexamine them in the light of contemporary logic.

The other work has a deceptive title. *Medieval Logic*, as a title, conjures up the impression of a monumental work, detailed and exhaustive, of the whole of scholastic logic. The sub-title and the author's own minimizing remarks fail to alleviate one's disappointment in the contents. It is not the nature of these contents so much as their paucity that will produce dissatisfaction for many readers, especially symbolic logicians. This could have been avoided by a more appropriate title. In view of the basic purpose of the work, namely, promotion of understanding between scholastic logic and modern logic, this resultant disappointment is most unfortunate. The sub-title hardly mollifies this disappointment because

the booklet is not a real outline, since an outline, although not detailed and exhaustive, is nevertheless supposed to be comprehensive. Yet it is an interesting little book as far as it goes, and perhaps will tend to make many moderns think twice before dismissing the content of scholastic logic. It is felt by this reviewer that Fr. Boehner should have collected more material and written a more comprehensive and detailed manuscript before attempting publication. Quick publication of such minimal results may not have the effect which he sought, but rather, just the opposite. Certainly, many scholastics will be scandalized by his rejection of material logic as a contradictory concept. A more cogent method of persuading them to accept this truth would have been to show that St. Thomas, foremost of all scholastics, was not opposed to logic as a strictly formal science. Far from doing this, St. Thomas is scarcely mentioned! Even modern logicians would have expected a brief discussion of St. Thomas in a book entitled *Medieval Logic*. This is even more lamentable since it is an actual fact that St. Thomas did not teach the formal-material approach to logic, despite what Maritain, Gredt, and others say. St. Thomas did not deny that the doctrine contained in the *Posterior Analytics* was logical; he merely recognized that this "material" approach to syllogistics could not be extended to the rest of logic as John of St. Thomas has it. This is the only "material logic" understood by St. Thomas, and as such, it does not deny the essential formalism of logic. It is nothing more than Thomistic axiomatics. A schematization of St. Thomas' logic in the last chapter of the author's work, though it might have revealed his logic as inferior to other scholastics, would have shown quite clearly that he did not believe in the existence of a "material logic."

It is also felt that the doctrine of supposition exposed in chapter two of Part Two will antagonize contemporary logicians. *Suppositio* is a rather repugnant thing as found in discussions of medieval logicians, since it represents their groping attempts to express adequately in natural language the precise, quantitative refinements which are inherent in the logical analysis of complex relationships and which are so succinctly stated in modern notation. The scholastics cannot be blamed if they lacked an adequate notation or medium in which to express their highly developed logical analysis; but the resultant confusion produced by the linguistically clumsy discussions of *suppositio discreta*, *suppositio naturalis*, *suppositio personalis*, *suppositio confusa*, *suppositio confusa tantum*, and many others, hardly helps to produce harmony and understanding between scholastic and modern logic.

However, the author has shown there is a need to investigate the logical literature of the Middle Ages, both because it is virtually unexplored (and thus an authentic history is still lacking), and also because it may reveal many points which should have been transmitted by scholastics but were not, thus necessitating their rediscovery by modern logicians. However,

there is always the danger, in this hindsight or *post mortem* analysis of older works, of reading too much into their contents. Extreme caution must be observed and, if it is, then a proper historical judgment can be made on medieval logic, and at the same time this accurate and comprehensive estimate of medieval logic may be the means of bringing together these two great schools of logic. If Fr. Boehner's work succeeds in arousing scholars to action towards the construction of this historical judgment, his work will be justified, although his publication of such minimal results probably will not sufficiently convince many that it is urgent for this *lacuna* to be filled. More material and a more comprehensive outline, even though it meant a later publication date, would have achieved his purpose much more efficiently, it seems to us.

The most interesting part of *Medieval Logic* is the section which discusses Ockham's consequences, explaining them and symbolizing them in modern notation. Of particular interest are those consequences which show that Ockham had a complete mastery of De Morgan's Laws. This is the best part of Fr. Boehner's book. Fr. Boehner is to be praised for his editing of the Burleigh text and for his attempt to promote harmony between scholastic and modern logic, or rather between the *descendants* of scholastics and modern logicians. There is a need of more men of Fr. Boehner's stature, logicians acquainted with both scholastic and modern logic, in order to bring about this harmony. Actually, the *existence* of such logicians will *constitute* this very harmony.

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The Mind of Kierkegaard. By JAMES COLLINS. Chicago: Regnery, 1953.
Pp. 308 with index. \$4.50.

The title of this book accurately indicates that it deals primarily with the content of Kierkegaard's thought, "the structure of his shareable convictions." This it tries to do, without overlooking the importance of the personal attitude of response and responsibility before the truth, an oversight which Kierkegaard constantly criticized the 'dons' for making." (p. viii) The exposition "confines itself to the philosophical aspects of his fundamental dialectic of esthetical, ethical and religious modes of experience," (p. xi) leaving to the theologians the religious and theological aspects of Kierkegaard's thought. In addition to presenting the thought of Kierkegaard, this book also "attempts to give a philosophical appraisal of Kierkegaard's standpoint." (pp. viii-ix) In this task of evaluation the focus is primarily on Kierkegaard in himself rather than as a progenitor of existentialism. He is, in this phase of Professor Collins' work, studied

not only against his "proximate philosophical situation" of post-Kantian German philosophy but also in the light of Christian philosophical thought found in St. Augustine and St. Thomas Aquinas.

Throughout the work Dr. Collins relies chiefly upon the works of Kierkegaard himself. Thus the initial chapter, "Kierkegaard The Man" is based upon his *Journals*, and sketches his life as son, lover, author and witness to the truth. The second and third chapters deal respectively with the esthetic and ethical views while in the fourth and fifth the philosophical works—*Philosophical Fragments*, *Concluding Unscientific Postscript*, and the "Introduction" to *The Concept of Dread*—are considered. The fourth chapter, "The Attack Upon Hegelianism" shows the negative aspect of these works, that is, as a critique of Hegel; while the fifth, "The Meaning of Existence," shows the positive contribution in the new theory of existence.

The eighth and concluding chapter, "Kierkegaard and Christian Philosophy," examines the degree to which "Kierkegaard's detached insights can be rendered philosophically meaningful by incorporation into, and correction by, the body of Thomistic doctrine concerning existence, man, and God." (p. xii) Finally, a "Bibliographical Note" lists, among other things, the twenty Kierkegaard titles available in English, and the major bibliographical, expository and evaluative works in English and other languages. In the twenty-six pages of footnotes which follow there are contained some independently valuable discussions.

This is a typical Collins performance: it is, therefore, the most mature study of Kierkegaard in English. It is as definitive an account of the *thought* of Kierkegaard as Walter Lowrie's *Kierkegaard* (Oxford, 1938) is of the *life* of Kierkegaard. It is a detailed exposition of the Dane's teaching and a balanced evaluation of it against the background of the classical philosophy of the West. As exposition, it is richly informed, sympathetic, cautious in showing how teaching on one point is modified by teaching on a related point. As evaluation it is just, objective, positive. Dr. Collins is aware of the legitimate claims of the "contextually true" without ever confusing this with the "simply true." He neither imposes judgment on Kierkegaard nor avoids that judgment. It is as though in Collins' mind philosophy itself revealed the depths and the imbalances of Kierkegaard's thought; though Collins did not formulate but merely discovered the judgment which reason itself had already passed. In him the voice of reason and of philosophy speaks very purely.

His style has the same quality of purity. There is in it neither cleverness, nor rhetorical device, nor the slightest intrusion of self. The self-effacement, the preoccupation with the problem at hand, which is so marked in Aquinas, it found here. The brilliance of this book is intellectual, not verbal. The writing is clean, having no unnecessary or inexact word. Because the writing is studious, though not studied, so must be the reading.

The work of James Collins, in his numerous articles, in *The Existentialists* and now in *The Mind of Kierkegaard* raises two questions: first, how shall his work be classified? and second, what is his own philosophical position? or, more specifically, what are his own relations to Thomism?

It is not at all impossible that in the case of so young a man these questions are impertinences or, at least, premature. It is desperately important to that freedom of soul without which philosophy is impossible, that he be not catalogued, but simply be left alone to be himself. Yet the quality of his researches is such that he cannot long escape being discussed as one of the most important figures in American philosophy.

It is not easy to decide whether he is a philosopher or an historian of recent and contemporary philosophy. Assuming that one refuses the disjunction and insists that he is both, then which is he formally? Is he a philosophical historian, or is he a philosopher who philosophizes on the data of the history of recent philosophy? I do not know. But I should much rather worry about this problem and have Dr. Collins go on writing his books than have Dr. Collins worry about it. What is certain is that he is writing in a well-known philosophical *genre* and that in that *genre* he has no betters.

His relation to Thomism is almost unique in this country. It is self-evident that he is fruitfully familiarizing the Thomists with contemporary thought. Quite possibly he is also fruitfully familiarizing the non-Thomists with Thomistic thought at the crucial point of contact: Thomism looking at the contemporary scene. However successful this two-way explication may eventually be, it is already evident that his Thomism has several admirable characteristics. It is in the first place, internal, organic. His Thomism is not a set of answers at the back of a mathematics book with which the solution reached by student Kierkegaard is quickly and neatly compared by teacher Collins. His Thomism is a habit of his own mind. No need to consult a given article of the *Summa* because Thomas has gone too deep into Collins. The spontaneous judgment of his own intellect is a Thomistic judgment. For this reason, the less he mentions Aquinas the better.

His Thomism is, secondly, like that of Aquinas, discriminatingly assimilative. (The adjective without the adverb is mere lack of intellectual discipline.) He is open, but reserved. And the reserve flows from precisely the same incorrigibly philosophic habit of mind from which the openness flows. Thirdly, his Thomism is simple, uncomplicated. It is merely that he perceives that both by virtue of the intrinsic excellence of Thomas' philosophy, and by virtue of the comparative superiority of it to other ways of thinking, that it is most splendid in a rich tradition. Perhaps the surest sign of that splendor is Thomism's capacity to give a home to every fragment of truth, illumining it and being illumined by it. The back door to Thomism is precisely the study of the most definitely non-Thomistic philosophies, for sooner or later one is forced to see that

the point of their maximum intelligibility is the point of their critical insertion into an open, personal Thomism. Dr. Collins is the specialist in this sort of positive critique because he perceives that Thomas is the greatest among greats, but not one against others.

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The Platonic Heritage of Thomism. By ARTHUR LITTLE, S.J. Dublin: Golden Eagle Books, 1952. Pp. 305 with index. 18s.

In this work Father Little offers a very convincing study of the decisive influence of the thought of Plato in the formulation of the central doctrine of participation as the key to Thomistic metaphysics. It is held that this influence is not so readily recognized by many Thomists for the reason that St. Thomas, an acknowledged Aristotelian, radically changed what he consciously or unconsciously borrowed from Plato and expressed the latter in Aristotelian language of potency and act. Thus with some degree of truth, from different approaches, one might call practically all Thomistic philosophy Platonic and yet also say nothing is Platonic. For the purpose of this discussion the author at the outset (Preface) defines the term Platonic influence thus: "What we shall mean by Platonic elements of Thomism are those doctrines of St. Thomas that are derivable from the parts of Plato's own philosophy that were rejected or neglected by Aristotle." What Aristotle so indiscriminately rejected in the thought of his teacher was, of course, the Platonic doctrine of Ideas or Subsistent Forms, not only in its original expression, but in any modification of it.

Father Little feels that the reluctance of Thomists to admit this influence (a reluctance noticeable in St. Thomas himself in view of historical circumstances under which he wrote) and to insist on an almost exclusive Aristotelian source for the Saint's philosophy is to endanger the Thomistic central doctrine of participation. Incidentally the author notes five other philosophers in Italy, Germany, and France who also arrived at the same conclusion independently of one another, namely, C. Fabro in his *La Nozione metafisica di partecipazione secondo S. Tomaso*; P. Santele, S.J., in *Der Platonismus in der Erkenntnislehre des heiligen Thomas*; L. B. Geiger, O.P., in *La Participation dans la Philosophie de S. Thomas*; J. de Finance, S.J., *Etre et Agir*, and G. Isaye, S.J., in *La Théorie de la Mesure*.

In an introductory historical section the author treats of the "battle of Aristotle" and his commentators of more than a thousand years after the Greek philosopher's death, especially the Mohammedan Averroes and the Christian Siger of Brabant, both considered heretical within their

respective faiths. Although St. Thomas had proved that a philosopher who accepted Aristotle, and even Averroes, with critical reserve need not be a heretic, nevertheless defenders of the Stagirite, even where he taught the truth, faced great difficulty in their defense, in view of the notable Aristotelian errors which were generally evident. The author also shows that St. Thomas was sometimes more generous in his interpretation of Aristotle than the latter deserved. For example, since Aristotle insisted on the absolute or metaphysical necessity of eternal motion in the world it would follow that God as the Immovable Mover was not the efficient causes even of motion in the universe. Yet in his commentary on Aristotle's *Metaphysics* (II, 2) St. Thomas seems to permit the conclusion that in a single passage Aristotle (*Metaphysics* 993b25) held for such efficiency which would be quite contradictory to his fundamental principle of eternal motion in the universe. Thus Aristotle would be shown to have exactly the same divergence from the doctrine of Creation as did Plato, both explaining the world as forms efficiently produced by God in a subject matter independent of Him. Actually the cleavage between the universe and God in Aristotle is far more complete within the exact interpretation of Aristotle's own principles. This is a position at complete variance with the fundamental doctrine of St. Thomas.

In the second section we proceed to the fundamental thesis of participation as the ascent from the many to the one. In general, "to participate means to have or to be in limited measure a perfection that in its fullest possibility constitutes another." (p. 38) St. Thomas explains the word *participare* as *quasi partem capere* or *ab alia partialiter recipere*, to receive from another, as it were, a part of his perfection (*II de Coelo*, lect. 18; *de Hebdom. Boetii*, c. 2). Participation therefore means more than imitation or conformity with a model. Real participation will imply that the standard is the efficient cause of its perfections as communicated to the participants. But expressly and by definition participation is not efficient causality, but merely the possession, in a way not explicitly declared, of a part of the perfection of the standard by the participant. In his doctrine of universal Ideas or Forms "what Plato asserted and Aristotle denied was that this material world of ours was derived at least in its formal nature from the spiritual world and only on this basis can any important doctrine of participation be erected." (p. 42) For Aristotle the only real participation is participation by the imperfect in the relatively (not absolutely) perfect in that which is perfect in the same line or genus.

To Platonic principles we owe the doctrine that there is a real Supreme One from whose perfection all lesser perfection is derived. St. Thomas knew of this doctrine. To Aristotle we owe the doctrine that the One is singular and concrete, not a realized abstraction. To St. Thomas alone we owe the final perfection of the doctrine, the principle that the perfection of the One can only be expressed in terms of the transcendentals and can

only be participated analogically. Likewise in the problem of the universals St. Thomas joins Plato against Aristotle in admitting the universal *ante rem* but, of course, St. Thomas puts this universal in the mind of God as against Plato's subsistent universal. In this way he is able to accept Aristotle's whole doctrine of abstraction while recognizing it as incomplete. Similarly St. Thomas relies on Plato rather than Aristotle for his proof for necessary truth of the judgment in necessary being, a position which Aristotle overlooked. However Aquinas at the same time corrects Plato's error of assuming that necessary truth formally and not fundamentally represented eternal being. Finally Father Little shows at great length the strictly Platonic character of the famous Thomistic Fourth Way for proof of God's existence based on exemplary causality. Its various versions and interpretations are thoroughly considered prior to its vindication, both in itself and in its related proof from eternal truths. Since the other four ways depend on the objective validity of the principle of efficient causality this section closes with an extensive "proof" for this principle, a discussion which seems to us as unduly complicated since this principle is immediate and self-evident once the distinct principle of existence is admitted as an intrinsic principle and the highest expression of perfection in all the beings of our immediate experience.

The concluding sections consider the descent from the one to the many through the principle of passive potency in the latter. Then important psychological, ethical, and social errors or obscurantisms in Aristotle's philosophy which follow upon Aristotle's denial of participation are discussed. The condition of the possibility of finite beings is their distinction from Infinite Being by their being composed with a kind of non-being or limit really distinct from the perfection limited, that is, their famous real distinction between essence and existence. "The doctrine of the possibility of creatures by participation in God is a doctrine of the possibility of the non-God that is yet like God. This likeness is necessary because by the doctrine God is the exemplar of creatures which must therefore represent or resemble him." (p. 17) Since similarity implies diversity, it is in the passive potency in creatures and its exclusion from God (Pure Act) that makes participated creatures possible. Here Aristotle and Plato mutually correct each other to have their thought developed by St. Thomas in a doctrine of participation far beyond their deepest speculations. This influence is summarized as follows: "A. Plato held the real distinction between essence and existence but never dreamed of the additional composition of the essence itself from matter and form; B. Aristotle admitted no real distinction except that of matter and form in the essence, which he conceived as two positive existences in the manner of Suarez: he too admitted only one passive potency but a different one from Plato's; C. Thomas saw the necessity of two passive potencies and united Plato's doctrine with Aristotle's; but his concept of passive potency in general was

Platonic. This was to be expected, for if Plato's passive potency is general and Aristotle's particular, being confined to material things, Aristotle's limited vision can only be easily explained by supposing that he overlooked some truth necessary to the idea of passive potency in general." (p. 202) Father Little also gives his own extensive defense of the distinct principle of limit as passive potency and hence of the real distinction of essence and existence in all finite beings. Then follows a careful comparison of the respective views of analogy in Plato, Aristotle, and St. Thomas consequent upon their positions with regard to the principle of limit.

To conclude his case the author shows how Aristotle's doctrine of eternal motion makes it impossible for him to recognize passive potency formally as a limit and therefore requires him to reject a doctrine of participation. Hence metaphysically he can have no doctrine of real analogy, nor any valid proof for God's existence. Nor does he have any real knowledge of God's nature. Since the finite essence is not a similitude of God, it cannot testify to His existence as its exemplar. On the same ground a denial of Divine Providence follows. Psychologically and ethically the spirituality and immortality of the human soul must be denied and its freedom considered to be untenable as well as its moral obligation in any true sense. Man must be declared to have two natural and independent ends and his moral personality is inadmissible. Socially the nobility of man's work is without rational foundation since his spiritual personality is impugned. Each of these erroneous propositions is shown to be corrected by St. Thomas in the light of his own central doctrine of participation.

There can be no doubt that Father Little has made a brilliant case for his position. It is admitted that of Plato himself St. Thomas was only able to read and fully understand the *Timaeus*, and perhaps the *Phaedo* and *Meno*, which were probably the only dialogs in his time translated into Latin. But of course he had the writings of the Neo-Platonists, St. Augustine, Boethius, Proclus, Erigenas' translation of the Pseudo-Areopagite, all of which may be generally characterized by Aristotelianized Platonism. At the same time it can be said that St. Thomas may not have recognized the Platonic influences but discovered their views independently for himself. To us this seems rather unlikely. However, our chief interest, as Father Little says, is in the Thomistic doctrine itself rather than in its historical parentage. What this work does is to underscore the very original and revolutionary character of the whole approach of Thomistic metaphysics. Perhaps Father Little, in his enthusiasm, may be charged with undue emphasis on the Platonic influence as contributing towards that revolution, though we do not think that is true upon the record here presented. We think of his study as a valuable counteraction to the more traditional attempts to present St. Thomas as simply developed Aristotelianism and more or less strictly confined within its limits. Emphasizing the Platonic influences which are irreconcilable with the Aristotelian

may help us to see how different is St. Thomas from both the great Greek thinkers and therefore how much more profound is his own original insight into the mystery of being. We believe this work a major contribution to the real understanding of St. Thomas to be placed alongside the works of Fabro, Santeler, Geiger, de Finance, and Isaye, on this important doctrine of participation as the key principle of Thomism.

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Science in Synthesis. By WILLIAM H. KANE, O.P. and others. River Forest, Ill.: Albertus Magnus Lyceum for Natural Science, 1953. Pp. 289 with index. \$3.50.

There is something quite wrong in the universe of modern scientific thought. The error (or errors, depending upon how fundamental the roots are) has its ramifications throughout the entire structure not only of educational institutions but as well of the thinking of "modern man." The fact that the error has some very definite relation to the lack of unification of the sciences is recognized by some. There are others who maintain that atomization on every level is the very instrument of and not merely a sign of scientific emancipation and progress. Still others see no problem at all.

There have been a great number of volumes addressing themselves to the task of specifying this problem and offering various solutions. Philosophical and scientific conventions have devoted much time to the subject. The results so far have had varying degrees of failure. In some instances the readers have laid down the book or the participants have come away from the discussions with really nothing but aversion to philosopher or to scientist, or to theologian, to whomever might seem to be trying to shackle the other.

The present volume is the published summary of a portion of what seems to be the most promising approach to this problem to date. In general it has overcome many of the difficulties which have prevented a truly "scientific" analysis of the problem on a level where alone it might be specified and solved. The authors do not believe that the problem can be faced in the narrow thinking of one particular science, nor in the confines of one particular age or stage of the development of that science, but rather that the problem must be specified and ultimately solved in the context of the whole history of science and human thought and in the broad expanses of all of the major disciplines. How this is accomplished is the uniqueness of the Albertus Magnus Lyceum for Natural Science.

The Lyceum is a "permanent institution of collaboration" established at

the Dominican House of Studies, River Forest, Ill. The dialectical methods by which the institute overcomes the obvious handicaps of other attempts are only new in the sense that they are not a part of the present scientific society but rather have their lost roots in the "dialectical method" of Socrates as well as the disputations of the Middle Ages. A meeting of the minds is certainly an indispensable foundation for the objective of the unification of the sciences for this can hardly be accomplished without the unification of *scientists*. In coming to agreement, "a meeting of the minds," it is perhaps even more important to discover underlying disagreement in apparent agreement as it is to uncover underlying agreement amidst apparent disagreement.

The method is precisely this: that of systematic discussion in terms of questions and expositions among the members. The topics for discussion are based on standard texts in the fields. A leader of the group had the task of initiating the discussion with questions and also of closing each session with a summary of the discussion. Though unanimity might be desired, it was rather understanding which was the prime objective of the sessions. As it turned out, it seems that there was little unanimity but considerable progress toward cooperation and understanding. Total success was, however, not achieved in any of the sessions but there does seem to be manifest a progressive trend toward a perfection in this order as the weeks proceeded. Whether this was due to the increased perfection of the method or to the weekly changes in subject matter or to some other cause it is difficult for a reader to determine.

One each of the first four weeks was devoted to physics, chemistry, biology and psychology consecutively. The fifth and final week was given to a summary of the work of the earlier weeks. Topics for discussion touched some of the most basic questions in each of the sciences, beginning with the pertinent question as to the very scope of the crisis in the sciences of nature. Others took their points of departure from the so-called "revolutions" in scientific method exemplified by classics of Galileo, Newton, Einstein, Harvey, Darwin, Watson and Freud. This device was used to look back to the sources of the particular science to ascertain what was actually retained as well as what was overturned. This was further fruitful in making clear the little known ways in which modern science has its roots in history and how relative the concept "modern" really is. It was around these that other questions relative to a "meeting of the minds" as well as the search for problems and their solution were centered. With these as some of the points of departure some of the most interesting as well as controversial issues were discussed such as quantity, mathematization, natures and causality in physics; quantity vs. quality and the periodic table in chemistry; the concept of life, and evolution in biology; the body-mind problem, problems of cognition and of faculties in psychology. Throughout the entire session general questions were raised such as the

possibilities of demonstration and proof, the place of modern logic in modern science and the relation between fact and theory in science. These are some of the topics discussed. The topics which were chosen could be but a representative list in view of the limited time and objective.

The fifth and final week of the session was devoted to a summary of the preceding four. This summary included a comparison between Aristotle's outline of the natural sciences and a modern outline. The possibilities of the contributions which the ancients can make toward the modern goal is noteworthy. The use of the Aristotelian unifying structure as a framework of modern scientific material is seen to be quite feasible.

A general conclusion was reached to the effect that true ancient science and true modern science both have reality as their measure which is contrary to a common erroneous belief that they are in some ways based upon preconceived "*a priori*" sources. It was concluded that both the ancients and the moderns in actual practice put their conclusions to the test of reality. Another general conclusion outlined was in regard to modern logic as *the* logic of science. It was concluded that true "traditional logic" does not contradict the "consistency" principle of hypothetical logic but rather includes it. Neither is it true that the progress of modern science is the consequence of the overthrow of Aristotelianism. It was further concluded that there is a modern tendency on the part of other natural sciences to yield to the temptation to imitate the formalism of "ideal" physics, and that real physics along with the other sciences have much to do in regard to the clarification of their own fundamental premises and objectives.

The objective of this, the first summer session of the Lyceum, was this presentation of a "tentative outline of a unified natural science." Certainly progress was made and is here well outlined.

To some, the unsatisfactoriness in the conclusion *as tentative* might be the sign of failure again. To those who for some time have sought in vain for a solution; to those who have actively argued with philosophers and scientists with a view to the unification of the sciences, this lack of a definitive gilt-edge solution is really a sign of encouragement. This seems the healthiest start yet. It proposes no more in the conclusion than a "tentative outline of a unified natural science," but progress was made in the direction of the ultimate goal and this progress is here well outlined. I am sure that those interested in the objective of the unification of the natural sciences can profit immensely by the work already accomplished by the Lyceum.

Attempts at criticizing science from without have been fruitless. There are many ways in which science is autonomous and hence many places of refuge in the face of criticism. An underlying principle in the attempts of the Lyceum is the most laudable principle of self-criticism. This can, I believe, be a successful endeavor because the scientists themselves can

come to realize that basic principles and presuppositions need to be understood and vindicated and that the formal, efficient and final causes must be taken into account in the structure of any science. No one wants to shackle true scientific progress with out-moded tools or methods. It is true, however, that what is old is not necessarily out-moded. It may be that the very heart of the present crisis of the sciences of nature is the loss of foundation and hence ultimate direction which can be recovered by the methods of the Lyceum.

Other centers of collaboration could be set up with profit, perhaps through affiliation with the Albertus Magnus Lyceum, for they have learned much by a good start. It would be difficult to read this work without regretting that you were not present to protest a point, to make a point, to clarify a distinction.

The nature of the material reported will excuse some of the minor shortcomings of the work.

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BRIEF NOTICES

The Work of Theology. By FRANCISCO P. MUÑIZ, O.P. Translated by JOHN P. REID, O.P. Washington, D.C.: The Thomist Press, 1953. Pp. 50. \$.60.

An essential requisite for a good theologian is that he have a correct notion of the nature of theology. Among theologians themselves there has long been a tendency to place the definition of theology in the genus of *science*. Fr. Muñiz contends that this is too narrow a concept of theology; moreover, it is not the way St. Thomas conceives of sacred doctrine. Taking a higher view, therefore, Fr. Muñiz defines it as "a discursive *wisdom*, exercised under the light of divine revelation, on every truth revealed by God, either immediately and formally, or mediately and virtually." This is based on an analogy taken from the teaching of St. Thomas himself: as understanding is to wisdom, so faith is to theology. Fr. Muñiz then proceeds to show how the habit of theology functions in the various potential parts, with regard to the object and subject, with regard to theology itself as a science, and with regard to other human sciences. He concludes with a beautiful description of the sublime goal that is held out to anyone who would become the perfect theologian.

The inclusion in a later edition of this monograph of the diagram which accompanied the original article showing the whole of theology and its parts would add greatly to the value and utility of this work. (Cf. *Angelicum*, XXIV, 1947, insert pp. 120-1.)

The Philosophy of Human Nature. By GEORGE P. KLUBERTANZ, S.J. New York: Appleton-Century-Crofts, 1953. Pp. 444 with index. \$3.50.

One of the most impressive evidences of the vitality of Thomistic philosophy and of its growing importance among the intellectual currents affecting life in the English-speaking section of the world is the increasing number and high quality of the books available in the field. No longer must the student seek in vain adequate texts or reading material, and no longer can the ignorance of careless and casual despisers of Thomistic thought be excused on the basis of a lack of articulate presentation. The basic formulation of the best human thinking in the main line of the great tradition of philosophy is once more flowing into the stream of English and American literature.

The Philosophy of Human Nature, by Father Klubertanz, S.J. of St.

Louis University, is a worthy addition to the steady stream of books explaining and defending a sane philosophy of man. As an exposition based on the thought of St. Thomas and at the same time coming to grips with problems that have since arisen, it is adequate in content and well written. The philosophical psychology of Aquinas has been thoroughly digested by the author and is expounded with keen insight into its significance. There is throughout the work an insistence on evidence and a reliance on experience comparable to the best writing in the Thomistic tradition. And the fact that the author is not merely repeating or compiling stale formulas, but rather offering the considered product of his own lively thinking gives the book a vitality that captures the reader's interest and carries him eagerly from topic to topic. The style is generally lucid and interesting, and is the result of a constant striving for accuracy of expression that is in most cases achieved. Even where this accuracy of expression is likely to cause difficulty to the superficial student there is no talking down but rather an attempt to explain that frequently is highly successful.

The result is an unusually fine textbook saturated with the wisdom of St. Thomas and the other great investigators of the problems of human nature. Original in arrangement and method it is geared to the demands of the modern mind. Its very completeness, which could be a stumbling block to some students, will be an added incentive to the more serious, and the author has marked by asterisks those sections which can easily be omitted in the interest of brevity. The definitions are usually good, the readings at the end of each chapter well selected, and they cannot fail to be helpful to an inquiring mind. An abundance of footnotes will lighten the task of the teacher and aid the student by eliminating many sources of confusion and misunderstanding, particularly those that occur because of terminology.

The author's introduction is an invaluable aid to students wondering about the differences between the philosophical and scientific approaches to the study of man, and while it does not attempt to solve all the problems, nonetheless it should be an effectual antidote against a "scientific" attitude toward knowledge. The chapter on "The Unity of Man" is, in general, clear and satisfying; its one fault is a failure to relate the unity of man at once and explicitly to the hylomorphic doctrine which is curiously left unemphasized in this and the following chapter. The treatment of knowledge leaves little to be desired; most of the initial difficulties of students are anticipated and completely met. The emphasis on the passive nature of the powers of knowledge is sound, but it should be counter-balanced to avoid misunderstanding; these powers are really passivo-active.

The perennial difficulty of settling upon an English terminology that will be presently significant yet related to the classical Latin expressions

has been faced bravely and with success in some cases, but it is questionable whether the use of "the unifying sense" for the *sensus communis* offers any advantage, since unifying is not its only function nor even its chief one. Perhaps St. Thomas himself wrestled with the same problem.

In the discussion of the internal senses are to be found the weakest places in the book. The definition of an internal sense as "a sense power which deals with an object already known by one or more of the external senses" (p. 150) is very bad, not only because it is so ambiguous as to be meaningless but because it misses the whole point which involves not time but the mediation of the external senses between the internal senses and the object. And there are several other difficulties in the description of the internal senses. The author seems to dislike the term "expressed species" and uses consistently the simpler word "image" which he prefers to relate solely to the imagination. Yet the argument admitted as demonstrative in the case of the imagination (p. 140, footnote) seems equally demonstrative as applied to the memorative and estimative powers. This is of minor import since the question is obscure, but it is difficult to escape a feeling of confusion when we are told that in imagining a mythical object (e.g. a winged horse) "the only object I can be said to be imagining is the image itself." This surely cannot be intended in its obvious subjectivistic sense, but it could easily be so understood. The difficulty is probably a matter of expression and emphasis but could be baffling to students. Another absolute statement to which exception may be taken is that "every sense perception of a thing as a distinct object involves an act of the estimative power." (p. 150) Is this true? Finally, in writing about the appetites, the author reverses the usual procedure by treating the will first and then the sensory appetites, but he gives a good reason for so doing and the treatment is sound and exhaustive. This very completeness is sometimes permitted to blur the main outline of the discussion, but again it is always possible to omit the sections pointed out by asterisks.

These few points are obviously of minor importance and in no way detract from the general excellence of the work which we are certain will see extensive service as a text. Professors and students alike are in debt to Father Klubertanz for making this volume available.

Avicenna's Psychology. By F. RAHMAN. London: Oxford University Press, 1952. Pp. 139. \$2.50.

This book is substantially the contents of a doctoral dissertation presented to the University of Oxford in 1949. The full Arabic text has been omitted but copious notes refer to variant readings and possible textual emendations. As we have it the English translation gives a clear idea of Avicenna's psychology in the general framework of his *Physics*. It casts

a good deal of light on such topics as the practical intellect, the grades of abstraction, proofs of the immortality of the soul and the denial of the transmigration of the soul, which were not found in the psychology text published by Landauer in 1875.

In format the actual 45 pages of text are preceded by an Introduction of 23 pages and followed by a Commentary with historical and explanatory notes covering 59 pages. Unfortunately sections of the Introduction become quite frequently just prolix discussions of the historical development of a concept. It would have been more advantageous to have integrated such discussions into the Commentary. On the other hand, it seems that much of the simple summarizing of the contents of the chapters would have been better placed in the general framework of the Introduction, which already contains much of the same material.

Not everyone familiar with the content and development of Aristotelian philosophy will agree with certain evaluations and interpretations in the Introduction and Commentary which seem to be wedded to just one element in the long tradition, that of Alexander of Aphrodisias. This would explain the author's difficulty in understanding Avicenna's treatment of the immortality of the human soul and his distinction between soul, viewed in general just as soul, and human soul. At times it appears somewhat difficult to equate the introductory analysis with the text itself which follows. E.g. the author's interpretation of perception as merely "passive reception of the form of the sensible object . . ." (p. 7) seems to be a strange introduction to the translated text: "The forms of all the sensibles reach the organs of sense and are imprinted on them, and *then* the faculty of sensation perceives them." (p. 27 italics mine.) For the most part the whole subject of analogous predication has been ignored and as a result many problems are presented in hopeless confusion as completely insoluble and/or meaningless.

Though the reviewer is unable to compare the translation with the original text, the English version appears to convey the general impression of fidelity to Avicenna's philosophical position in psychological studies presented in other writings. It makes a welcome contribution to the advancement of Avicennian studies. The Introduction and Commentary should be read and weighed with careful, critical attention.

Right and Reason, Ethics in Theory and Practice. By AUSTIN FAGOTHEY, S. J. St. Louis: C. V. Mosby, 1953. Pp. 583 with index. \$5.75.

The aim of the author is a college text which would be clear and readable, avoiding both popularity and technicality. The whole of general and special ethics is treated with sufficient explanation of the main points of doctrine and with good bibliographies at the end of each chapter. While

there is abundant citation of other schools of thought, the author states his allegiance to the Aristotelian-Thomistic system. However, students of St. Thomas will at times be dismayed by the positions the author assumes. For one thing, the norm of morality is said to be human nature taken completely, while both Aristotle and Saint Thomas held that the proximate norm was *recta ratio*. Significantly, little attention is given to the virtue of prudence which occupied a keystone position in Aristotelian-Thomistic ethics. The emphasis falls here rather on law, obligation and conscience giving the work an unbalance which is not to be found in St. Thomas.

Ontologie—Versuch Einer Grundlegung. By CASPAR NINK, S. J. Freiburg: Herder, 1952. Pp. 508. 28 DM.

This book characterized by the author as based upon the traditional Aristotelianism and the metaphysics of the Schoolmen, is truly a neo-scholastic work in ontology. It follows the three-fold classical division: being and its constituent principles; the transcendentals; and substance and accidents. Throughout the work the problems of modern philosophy are considered, particularly those of the German transcendentalists.

The author's fundamental thesis is that the intrinsic principles of being have a natural and logical priority, to being, and although formally distinct are really identical in the indivisible unity of being. The four constituent principles of being—the essence or nature, the principle of singularity in general, the principle of individuation, and existence—are related to each other as potency and act, which relation is one of real identity and formal distinction. This thesis is expounded with near classical dignity in a logical and systematic manner. However, the author does not take into sufficient account other scholastic opinions or objections to his thesis, and such allusions as are made are hardly adequate to clearly delineate the difficulties.

The Good in Existential Metaphysics. By ELIZABETH G. SALMON. Milwaukee: Marquette University Press, 1953. Pp. 93. \$2.00.

This little book is the Aquinas Lecture delivered at Marquette University in March, 1952 and published one year later. The title is misleading. Not one word is devoted to the metaphysics of existentialism, the notion of good in existentialism, or any other phase of existentialism. A correct title would be "The relation between the metaphysical good and the moral good in Thomistic metaphysics." No doubt Dr. Salmon, by her choice of title, meant to imply that Thomism is an existentialism or *the* existentialism. There is much to be said for such a conviction, as M. Maritain's *Existence and the Existent* demonstrated. But the identification of Existential meta-

physics with Thomistic metaphysics, however true, is not so *self-evidently* true as to be merely assumed without one word of explanation.

The specific problem Dr. Salmon sets herself is to determine the precise point of intersection between the metaphysical notion of the good and the moral notion. Her conclusion is that "... the ontological good in reference to the maintenance of man as rational constitutes the basis of moral goodness." However, "the ideal, then, for man, would be that condition in which the end, Pure Existence, could be present to man as an Existent. . . ." (p. 74) Thus the Beatific Vision is seen as the supernatural coincidence of man's moral good with the highest ontological good.

This is a scholarly lecture, like most of those in the Marquette series. But Dr. Salmon's gifts of communication do not do full justice here to her gifts in philosophy. That she is a woman given to thought is evident. That she evokes thought in others is not so evident here.

The Philosophy of Science. By STEPHEN TOULMIN. New York: Longmans, Green, 1953. Pp. 184 with index. \$2.40.

This book is an attempt to follow Einstein's advice and bring the general reader into closer contact with what scientists actually do rather than with what they say about their methods. Problems which puzzle the layman when reading about the so-called exact sciences are touched upon in order to show by simple examples some of the steps from common sense to modern science. The meaning of discovery and the function of explanations, the use of mathematical methods, the role of theories, hypotheses and laws of nature, uniformity and determinism are all discussed from the point of view of the practicing scientist rather than from basic principles.

In physical science mathematical methods and mechanical models are fruitfully applied wherever familiar phenomena can be viewed in a new light which reveals the mathematical form of the law and which permits valid inference. By contrast the natural scientist, who cannot apply mathematics as does the physicist, is said to be content with the appearance and habits of organisms and to seek merely the law of the form. Laws do indeed permit inference in special cases, but neither laws nor theories are causal. The scientist presumes the formal applicability of laws to the phenomena, but he does not assume the uniformity of nature or the universal validity of laws. Determinism is found in our inferential processes rather than in things. Yet there may be an objective foundation for the principles of physics and for our scientific procedures. "It is as a result of experience that we find out what are the rational ways of studying the world and its contents." (p. 154)

The ways here described are not profound enough to reveal the basic principles of natural things and of physical and natural science.

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